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# MUNICIPAL JOURNAL AND ENGINEER



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### Unprofitable Municipal Reports

We ask the particular attention of all city officials to the recommendations on page 507 relative to municipal reports. That the statements therein are most conservative we know from our own experience. For instance, we received last week the report of a City Comptroller for the year 1904, and have received during the past month more municipal reports for 1905 than during any previous month of the year. Like the writer of that paper, we can see no reason for such delay, but even this would be pardonable, however, if the reports only furnished the desired information. But most of them do not.

We doubt, for instance, whether as many as ten per cent. of the reports published give the cost of street cleaning per unit area, or data from which this can be ascertained, to say nothing of the cost of cleaning each class of paving. Officials who are really interested in the work of their departments wish to know whether other cities furnish water or clean streets more cheaply than they do, or obtain their paving at lower prices, and why; how ashes and garbage are most cheaply collected and disposed of, and the cost per capita and per ton for doing this, and other facts of a similar nature. The existence of a desire for such knowledge is one of the chief reasons why this paper is read by officials in practically every city in the country. But city officials alone can furnish this information, and he who withholds his quota diminishes by so much the value of conclusions based thereon. If every city would promptly furnish the data suggested by Mr. Grosser, together with information concerning local cost of labor, cement, lumber, and other materials, the advance in economical methods of constructing and maintaining municipal works would be phenomenal.

### The People and Municipal Franchises

AMONG recent evidences of the resolve of the people to control public and quasi-public corporations, none is more significant than the action taken in various cities concerning street railway franchises during the last few months. It was but a few years ago that cities were gladly giving the use of their streets to traction companies. Later, when electricity made it possible to greatly increase the profits, they demanded that the companies pave between the tracks, clean and sprinkle the streets, and some, driving exceptionally hard bargains, demanded a share of the profits. But who would have prophesied, even ten years ago, that the companies would offer in vain, not only to pave and maintain a part of the streets, but even to give 2½-cent tickets for an eight-year extension of their franchise, which offer Detroit has just turned down by popular vote; or, seven tickets for twenty-five cents in return for a twenty-year extension, as in Cleveland; or, would beg for a franchise terminable at the will of the City Council, as in Chicago? In each of these cities the apparent aim is to gain a better control of the street railways, either by municipal ownership or by granting new franchises, with such restrictions as experience has suggested to be desirable. Cleveland, which now has a short line charging a three-cent fare, is the only one of these which has obtained any real, tangible results as yet, and her experience will be watched with great interest.

## LOS ANGELES WATER SUPPLY

**California City Will Expend \$32,000,000 Improving the System—Conduit 250 Miles in Length to be Built—Bonds Voted**

By T. D. ALLIN, M. Am. Soc. C. E.

LOS ANGELES, CAL., is a city of remarkable growth, its population having been increased fully 35,000 during the past year, with a growth close to 100,000 during the past three years.

The greatest municipal undertaking during the past year has been the decision to go to the Owens river, in Inyo county, California, for an additional water supply.

The conduit for conducting the water to the city will be approximately 250 miles in length and will cost approximately \$27,000,000, which, together with impounding reservoirs at the head waters of the Owens river and other expenses, will bring the final cost to approximately \$32,000,000.

Such a bold undertaking had never before been entered upon for a public water supply by a city of the size of Los Angeles, but the water was necessary and could not be had in adequate quantity at nearer points and at a less expense. The people quickly recognized the undertaking as a necessity and entered upon it with the same cool, deliberate enthusiasm that they would enter upon any other business undertaking which they believed would repay them many fold upon their investment.

In the first bond election for \$1,500,000 for the purpose of acquiring water rights and beginning the work, the vote was 14 to 1 in favor of the bonds, which clearly showed the united determination of the people to provide an abundant water supply for the city of Los Angeles.

Both preliminary and location surveys are now being made for the conduit, which will probably be of reinforced concrete, about 12 feet wide at the bottom and 28 feet wide at the top, from 8 to 10 feet in depth and covered.

Twenty-five thousand miners inches are available, which is equivalent to 325,000,000 gallons per day, and is  $8\frac{1}{2}$  times the quantity of water now being used by the city. The conduit will be a gravity line throughout, over valleys and desert and through mountains, with an opportunity to develop fully 80,000 horsepower along its line.

## MUNICIPAL LIGHTING IN TOPEKA, KAN.

THERE are differences of opinion concerning the cost of municipal lighting in Topeka, Kan. The city built the plant in 1888, and has spent little since then on renewals, so that it is now about ready for the junk shop, besides having a nominal capacity of about half the number of lamps necessary to properly light the streets. The problem now before the city, therefore, is whether to rebuild and enlarge the plant, or to abandon it and contract for the lighting. The Topeka Edison Company is now furnishing thirty lamps at \$65 a year on monthly payments, not by contract; and it is stated that this company and another stand ready to bid for the street light-

ing. The cost of municipal lighting is very properly considered an important point in deciding upon the next step. The Superintendent of the lighting plant estimates the cost at \$40 per arc lamp, but this does not include depreciation, loss of taxes or interest. It is reported that the system of accounting is so poor as to render it impossible to tell just what the cost has been, or even what the number of lights was for various years in the past, and there are practically no records of any kind for the period previous to 1899. An estimate of cost has been presented by the City Clerk, based on Council records of expenditures, in which the total cost for seven years is figured at \$635.04 for each of 295 lamps, the average number of lamps during that time, or \$90.72 a year. In this, interest is calculated at 6 per cent., and interest on running expenses and on taxes for this period is included, as is depreciation at a little over 6 per cent. In this it appears to us that an overestimate has been made as great as the Superintendent's underestimate. According to the figures offered, the depreciation has been about \$71,000 in sixteen years, which would give \$3,124.71 a year, instead of the Clerk's figures of \$5,072.14. Then  $4\frac{1}{2}$  per cent. should be a sufficiently high rate of interest, unless Topeka's finances are in an alarming state. Moreover, we can see no reason for including interest on running expenses and taxes. If modified according to these ideas the total becomes \$21,741.60 per annum, or \$73.70 per lamp. Even this cost it would be unfair to use in comparison, however, since it is admitted that the plant is exceedingly uneconomical, and a new one could probably furnish power for an operating expense 10 to 25 per cent. less than the present; just how much less only a study of the efficiency of the old plant can indicate. Topeka apparently needs the advice of an unprejudiced expert on the subject, and there are many other cities in the same position.

## Sewage Disposal at Altoona

THE sewage disposal system in Altoona, Pa., was established several years ago at a cost of \$100,000, and has been in every way a success. The city acquired land suitable for the purpose by purchasing two small farms a mile beyond the city, situated between the railroad and a range of high hills, and it is consequently completely isolated. The sandy soil made ideal filter beds, but was nearly valueless for farming. A series of forty beds, embracing a total of 58 acres, were laid out with irrigation ditches running around each bed, and a thorough system of under-drainage leads the effluent into the creek. A gate at each ditch enables the tender to regulate the flow as desired. The performance of the plant has been entirely satisfactory, the effluent reaching the stream being clear and having no odor perceptible. The filter beds have been found to be productive as farm land and are rented at \$350 per year. This disposal plant takes care of about one-third of the city's sewerage—or about one million gallons daily. The balance drains in another direction and is not yet treated, although a septic tank system is under consideration.



## REPORTS OF MUNICIPAL WORK\*

A MUNICIPAL report\* published long after the facts therein occurred might serve for occasional reference, but it does not fill entirely its purpose. Most of our cities publish their reports long after the period covered therein has passed. Six to nine months is nothing unusual, and some cities wait even a whole year or more. Your committee can see no reason why any report should not be published within ninety days after the period covered by the report. Where this is delayed there is either a gross misconception of the importance of the report and a misunderstanding of the wants of the public, at least that steadily-increasing part of the public interested in public affairs, or else there is room for suspicion that accounts are not kept and the data not entered in such a way as to allow of ready and quick compilation.

Financial reports, besides showing the cost of carrying on the government of our cities, are of but little use, without showing what was got for the money expended. Of course, financial officers have nothing to do with this, and it therefore devolves upon the various departments to make this showing; it is there that a lack of uniformity between the cities of this country becomes painfully visible.

No one, it is hoped, will ever deny, or even question, the desirability of uniformity in these reports, for the value of any one thing can be measured best by comparing it with similar things. The mere fact that one city spends, say for street cleaning, the sum of one million dollars, has really no meaning or value. The fact becomes valuable only in its relative position with the expenditures for the same purpose of other cities, and even that is not sufficient, for to measure the true value of that expenditure it should show the amount of street cleaning done for the money, the character of the pavement cleaned, and other details pertaining to that particular work. To-day it is almost impossible for anyone to compare the work of one city in the United States with that of another city from its printed reports, because of the wide diversion in the method of reporting. The United States Census Bureau, which took up the subject of municipal statistics about three years ago, is still compelled to send out annually an army of agents to ascertain from the records of each city, and by personal investigation, the data which are required. To remedy this, your committee would suggest such data as the following:

In reporting the work of paving the streets show: First, the character of the pavement; second, the price per square yard; third, the guarantee furnished; fourth, the amount of supervision and the cost thereof, exercised by the city. As nearly all cities have this work done by contract, the cost of the entire work would be sufficient. Where this work is done by the cities it would be desirable to show in the cost the amount expended for labor, for material, and for supervision.

In describing the work done in the sewer departments,

let there be given a description of the sewer construction, and the price per foot. Work done by the city directly should show the amount of sewers cleaned, the cost therefor per mile, the number of men employed in the department, the amount of wages paid, and all other similar data.

A report of street cleaning should not only show the total mileage of streets cleaned, or the area of the streets, but it should show the character of the pavement, for each square yard cleaned, the cost for each different kind of pavement, the number of men employed, whether machine or hand-cleaned, and whatever other work is connected with the cleaning of this particular street. It is evident that it requires less work, and therefore costs less, to clean a square yard of asphalt pavement than a square yard of granite, cobble stone, or wooden blocks. Different work is required to clean a macadam road than any other pavement, so that a report, in order to intelligently give the data of its Street Cleaning Department, should show all these particulars. Then a just and reasonable comparison can be made.

A report showing the lighting of the streets should contain all the facts, as to the kind of light, its candlepower, the length of its use per day or per year, and the price paid therefor, if furnished by a private company. When this light is furnished from municipal plants, the detailed cost of maintaining and operating such plants should be shown, the number of men employed, etc. Where the plant has been paid for from the bond issues, the annual interest paid should be included in cost of maintenance; the amount which is lost to the city by the non-payment of taxes on the part of the municipal plant should be added to the cost. Construction work should be kept absolutely separate. The report for water works has been a subject of many discussions; schedules for uniform reports have been drawn and published at various times. The schedules of the New England Water Works Association have been adopted by some cities, and your committee would recommend that their adoption be urged upon all cities.

The reports made in the manner shown here would undoubtedly be of great economic value, and inevitably lead to retrenchment, greater economy, and betterment of service where there is room for such. And this is the case in a large number of cities.

## Cost of Street Cleaning in Cleveland

DURING 1905, in the city of Cleveland, O., 49,572 great squares were cleaned by flushing machines at an average cost of 47 cents each; 59,496 great squares were cleaned by machine sweepers and pick-up gangs at an average cost of 99 cents each, and 45,566 loads of street sweepings and 3,405 of snow were removed. The "white wings" (patrol) cleaned 248,188 great squares at an average cost of 22 cents each, or about 22 per cent. of the cost by machine. The relative amounts of dirt removed, however, are not given. Removing snow cost \$11,869.53. The total cost of the department was \$191,595.94; as there was an average for the year of 298 miles of paved streets, this gives \$6.43 a mile for the year.

\*Extracts from a paper on "Uniform Reports," read by Mr. Hugh Grosser before the League of American Municipalities.

## MUNICIPAL NEWS

**ALABAMA, Bessemer.**—A large and at present somewhat mysterious industrial plant will be built near the **Septic Tank**, where several hundred acres of land have been recently purchased. The surplus water from the purification works is the inducement for the selection of this location. The water flowing through the septic tank has been sold for a long time, and it is a commodity that is always reckoned on in the operation of industries in the vicinity.

**Birmingham.**—E. M. Duncan, Bacteriologist and Chief Inspector of the **Meat and Milk** Department, in a letter to the Board of Aldermen makes the following recommendation: "I think it would be a good plan to have an ordinance passed requiring the proprietors of all hotels, restaurants, lunch rooms, and so on, to post a notice in a conspicuous place in their cafés, stating what kind of butter they propose serving to the public, whether dairy butter, creamery butter, oleo-margarine, and so on. Then we could make tests to see if the goods were being served as represented. As it is at present, anything that is colored and looks like butter may be served to the public as such, and is generally accepted by the consumer."

**ARKANSAS, Fayetteville.**—A petition is being prepared for presentation to the City Council, asking that the city be organized into an **Improvement District** for the purpose of issuing bonds to the amount of \$10,000 for the construction of a city hospital. A donation of a suitable lot of land by Mr. and Mrs. Stephen K. Stone is the occasion for the petition.

**Fort Smith.**—Representatives of the Women's Civic League appeared at a recent meeting of Council to urge the matter of **Cleaning Streets**. A member of the league said that as the men expected the women to keep the faces of the children clean, the women in turn expected the men to keep the face of the city clean. Alderman Henderson refused to respond to loud calls for his eloquence, and the matter was finally referred to a committee to report on the most desirable type of street sweeping machines.

**CALIFORNIA, Berkeley.**—In accordance with orders issued by Chief of Police Vollmer, policemen will hold weekly competitive **Pistol Shooting** contests. At the first of these contests H. P. Lee made the following score at twenty-five yards on a class: A slow-fire target, 92 per cent.; fast-fire target, 88 per cent.

**San Francisco.**—According to statistics collected by the California Promotion Committee, more than 6,000 **Buildings** have been erected in San Francisco's burned district and more than \$50,000,000 has been spent for improvements in the city. More than 35,000 men are engaged in construction work and 200 cars of debris are being removed daily. Market and the intersecting streets have been practically cleared and the sidewalks are being rapidly repaired. Permits to the value of \$27,000,000 have been issued, an amount only one million less than the value of the permits issued in Baltimore in the two years following the fire in that city.

**Sausalito.**—The city has installed a **Salt Water System** for protection against fire. It includes a thirty-thousand gallon reservoir on the summit of the hill on which the town is built and a four-inch pipe line leading from the bay, with hydrants on the terraces, and a powerful pump for conveying water to the reservoir. This system is only a nucleus for a more complete supply, which is destined to protect every portion of the city, that is to be installed in sections from time to time.

**COLORADO, Colorado City.**—The proposition for a convention for the purpose of revising the **City Charter** was beaten by a vote of 3,059 to 2,043.

**Denver.**—A large company has been organized by Myron T. Herrick, of Cleveland, O., and Thomas F. Walsh, of Denver, for the purpose of developing hydro-electric plants to furnish **Power** for interurban lines and for lighting. It is reported that the horsepower which will be developed will run into the millions and will result in establishing a chain of interurban railroads which will develop sections of the State within a radius of 100 miles of Denver that are now but thinly populated because of the absence of cheap and swift modes of transportation.

**CONNECTICUT, New Haven.**—The Park Commission has asked for \$5,000 to purchase lands in the Beaver Ponds district. It is intended to develop these lands and ponds into a **Park**; the proposed appropriation is only a beginning.

**Waterbury.**—Owing to the prevalence of **Rabies**, a special ordinance has been passed requiring the owner of a dog, upon notification of the Health Officer, to chain or otherwise confine his dog for a period of not less than three months.

**DELAWARE, Wilmington.**—Dr. Robin, City Bacteriologist, in a report on an analysis of a sample of **Water** taken from a pump at Seventh and Scott streets, says that the number of bacteria per cubic centimeter was 400, of which 180 indicated sewage pollution. However, the condition is not much worse than the city drinking water, so that no action was recommended unless examination in the locality discovers unsanitary conditions.

**FLORIDA, Jacksonville.**—At a meeting of the City Council, Councilman Brown stated that the city was losing thousands of dollars every year through merchants paying a much smaller **License** fee than they should pay. The matter will be taken up by the Committee on Taxation.

**St. Augustine.**—Revenues from the **Waterworks** are gradually increasing and a number of improvements are being made at the power-house and pumping station. Chief among these is the substitution of surface for artesian water in the boilers.

**GEORGIA, Athens.**—The city is about to open up a new **Quarry** just outside of the city limits. Only one street, Cobb street, will be paved with material from this quarry this year, but it will be put in shape for an active season next year.

**Atlanta.**—Pills and Pajamas as illustrated on **Bill Boards** of patent medicine concerns will be prohibited if the Evangelical Association has its way. Sign boards of suitable size will be placed a certain distance above the ground. This regulation is intended to prevent the boards from becoming a hiding place for vagabonds, tramps and thieves, as they are now generally believed to be.

**Savannah.**—The city is now considering a proposition from the Southern Cotton Oil Company to sell some seven million gallons daily of their surplus artesian **Water**. The oil company's plant is about a mile from the city's waterworks, so that a connection could be easily made. Either the consumption of water will have to be decreased through the extension of the use of meters or new supplies will have to be found.

**IDAHO, Boise.**—A power plant of 20,000 horsepower, located at the outlet of Ox Row tunnel, will be constructed for the supplying of **Electricity** to the street railways, for lighting and for power. Already 5,600 horsepower is said to have been engaged.



**ILLINOIS, Chicago.**—Mr. Harry Olsen has been elected Chief Justice of the new **Municipal Court**, a position unlike any hitherto existing in the United States. Twenty-seven judges of the new Municipal Court will supplant fifty justice and police magistrates. The Municipal Court may exercise all the jurisdiction of the Superior and Circuit courts, and in certain contingencies all the powers of the Criminal Court, in addition to its other duties.

Mayor Dunne has recently returned from Cleveland with his pockets full of **Three-Cent-Fare** checks, such as are now sold in the latter city. Succeeding this visit was the demand of City Car Expert Dr. Doty for better street car service or reduced fares. As the companies admit their service is inadequate, "why," asks Dr. Doty, "should the public pay the price of proper service"?

**Joliet.**—Engineers E. P. North and Walter Rice have submitted a report to the Joint Committee of the Council and the Commercial Club in which they mention several defects in the methods employed for the new **Water Power** development on the Desplaines river. The concrete is considered as inferior, being made of natural cement, and the foundations faulty. The embankments are not sufficient to protect the city in case of exceptional floods. Certain repairs are recommended as well as the addition of three feet to the height of the embankment.

**INDIANA, Indianapolis.**—The Board of Public Safety has requested of Chief of Police Metzger that he enforce strictly the ordinance recently enacted forbidding the pasting or scattering of **Bills** in public places.

**Muncie.**—Dirty alleys and a lack of interest by property owners in keeping them clean have compelled the Board of Works to take stringent action against the offenders and to adopt new rules for the collection of **Household Waste**. Hereafter tin cans and non-combustible refuse will be collected with the ashes. All ash and garbage receptacles must be kept on the premises and not placed in the alley or on the sidewalk. The emptying of water in alleys will be prohibited. Two new ash wagons will be used to work on the new plan.

**Terre Haute.**—The City Council has undertaken an investigation of the gas and electric **Lighting Service**. The City Attorney, in giving an opinion in reply to questions that had been put to him, said that the Council could fix a reasonable schedule for city service; that the city had no authority to require the company to provide a terminal station; that the city could insist on the use of cars equal to those in use in cities with conditions such as exist in Terre Haute; that the city could not order the restoration of the slips with six rides for twenty-five cents, because the franchise fixes only a maximum rate of five cents.

**INDIAN TERRITORY, Ardmore.**—An ordinance presented by Mayor Dick in regard to the **Peddling** of foods, meats, fruits and nuts on the streets which place a tax of \$100 a year upon vendors of such goods has passed its first reading. Another ordinance fixing a tax of \$200 per year upon anyone selling produce from cars within the city is also pending.

**KANSAS, Iola.**—The City Council has agreed to donate \$2,500 toward the drilling of a **Well** seven thousand or more feet deep. The well will be sunk below what is known as the Iola gas pool, as there are indications that still greater deposits may exist lower. Practically every factory in the field, and possibly two

neighboring towns, will contribute to the expense, which is expected to amount to \$20,000 or more.

**Leavenworth.**—A resolution has been introduced before the City Council which says virtually that the Fire Chief and the City Attorney shall notify all owners of **Public Buildings** of any character, including hotels, opera houses, skating rinks, and all places of amusement or public concourse, that they must comply with the recent State law with reference to fire precautions.

**KENTUCKY, Paducah.**—Some time ago the General Council decided on the plan of **Sewer Assessment** which it considered most just to the small property owner. The cost is to be distributed according to the superficial area of the district drained instead of by the front foot. In accordance with this plan, City Engineer Washington has reported that he estimated the cost of sewer district No. 2 to be \$1.48½ per square foot, the total area of the district being 87,550 feet.

**LOUISIANA, New Orleans.**—Superintendent Earl, of the **Drainage Board**, states that the drafting work of the department is being carried on as much as possible in the line of preparing permanent records of existing underground structures; not only those constructed by the Sewerage and Water Board, but of all others. These drawings are essential to the proper operation of the present and the planning of future underground work.

**MAINE, Bangor.**—City Treasurer Brennan has received from Inspector Fisher, of the New England Insurance Exchange, a bunch of thirty-five complaints against the manner in which City Hall and some of the other city buildings are **Wired** for electricity. Practically every room in the City Hall is defective in electrical arrangements, and changes will have to be made in order to comply with insurance regulations. City Electrician Cunningham states, however, that the work required will not entail great expense.

**MARYLAND, Baltimore.**—The Sewerage Commission's suggestion that its great **Pumping Station** in East Baltimore should be set in the center of a small park instead of being squeezed into the space of a few city building lots was explained by Chairman Leary, Mayor Timanus and Chief Engineer Hendrick to Major R. M. Venable, President of the Park Board, who finally gave it his indorsement and promised to bring it at once to the attention of the other members of the Commission. This pumping station will be equipped with enormous engines and will be a most interesting exhibit. Engineers and sewage experts from other cities will visit it, and it is also expected that many Baltimoreans will want to examine the plant and see the great pumps work.

**MASSACHUSETTS, Brockton.**—Acting under the advice of Dr. W. H. Brownell, agent of the Massachusetts Cattle Commission, Mayor Bradford is determined to prevent the further spread of **Rabies**. Dogs found at large and unmuzzled will be shot.

**Newburyport.**—The police of Newburyport say that never in the history of the city have so many and so serious **Complaints** been received. They believe that the limit was reached, however, when they received a complaint that boys had broken in the Highland cemetery and had a sham battle with the bones of those buried there.

**Springfield.**—By a unanimous vote of the City Council Mayor Francke W. Dickinson has been authorized to petition the Legislature for an enabling act compelling such changes in the **Track Locations** of the railroads entering the city as will be necessary to put through an elaborate river front improvement project.

**MICHIGAN, Detroit.**—As the result of the **Election**, Mayor George P. Codd was defeated for re-election to the Mayoralty and the street railway franchise discussed in our issue of November 7 was defeated. W. B. Thompson was elected Mayor.

**Grand Rapids.**—The property necessary for the new **Athletic Park** in the North End bordering on the settling basin has been transferred to the city. Early in the spring the basin will be turned into a swimming pool. A baseball diamond and a football gridiron will be laid out near by. A creek flowing into the settling basin will afford an opportunity for landscape effects, which, with other improvements, will make the park one of the beauty spots of the city.

**MINNESOTA, St. Paul.**—The compromise agreement in regard to **Taxes** made by the City Council and the street car company in March, 1905, will not benefit the city this year, and perhaps not for several years. The agreement was for the street car company to pay each year a sum equal to the difference between 6 per cent. of the total gross earnings of the company for the year previous and the full amount that the company shall be required to pay as general taxes. The 6 per cent. limit is estimated at \$4,960 this year, which does not exceed the general taxes plus a car license tax of \$1,600.

**MISSISSIPPI, Jackson.**—A trial has recently been made on the **Roads** approaching the city of a large Case road tracking and sod turning machine. In the course of a couple of hours the machine turned up the sod on about seven or eight acres of stiff land, the machine moving about easily with scarcely a jar or a hitch. It is stated that the board will contract for the machine and will put the roads approaching the city in condition first.

**MISSOURI, Kansas City.**—Plans for cleansing the **Sewers** and the catch basins of the city have been adopted by the Board of Public Works. Old-style catch-basins will be replaced with a new kind that does not retain any deposit to create an odor. Men will be sent through the main sewers to report on obstructions that may form stagnant pools. The 16- and 18-inch lateral sewers will be cleaned with a Shannon machine, which has been offered to the city on trial.

**St. Louis.**—The Public Sanitation Committee of the Civic League recently held a meeting to complete the draft of a comprehensive **Street Cleaning** ordinance. The bill contemplates primary separation of garbage, rubbish and ashes by the householder, and it is estimated that with it in force the expense of handling the garbage of the city will be reduced from \$500,000 to about \$200,000. The ordinance is based on the experiences of other cities.

**MONTANA, Great Falls.**—City Engineer Swearingen, in a communication to the Council, states that the efficiency of the **Water Supply** had been reduced fully 40 per cent. by reason of the contracting of the pipes between the general supply mains and the distributing system. An extension of the 16-inch supply main is recommended. The engineer also stated that trouble had been experienced with leakage of mains under railroad tracks occasioned by vibration of trains.

**NEW HAMPSHIRE, Franklin.**—Fires in the new furnaces of the Central **Heating Plant** are expected to be kindled soon. The steam arrangements are completed, and when everything is in readiness at the heating station the steam pipes in the school buildings, the Library and City Hall will be coupled on to the pipes of the new system. These buildings are now being heated by individual heating systems. On account of

the extensive agitation which preceded the establishment of the Central Heating Plant by the city, there is a great interest among citizens to see it in operation. Steam will be sent by underground conduits to two school buildings about twenty-five rods from the heating plant. The two other buildings to be heated are very near the heating plant. A part of the City Hall is heated by hot water, and a special hot water heater, connected with the new plant, has been installed for this purpose.

**NEW JERSEY, Camden.**—By a vote of 4,452 against 4,012 at the recent **Election**, the citizens declared in favor of a municipal lighting plant.

**Elizabeth.**—The citizens at the recent election declared in favor of a **Municipal Electric-Lighting** plant. A detailed estimate for such a plant has already been made and the cost is figured at \$165,250.

**Jersey City.**—Chief of Police Benjamin Murphy has requested the **Police Commissioners** to investigate the disappearance of \$38 from a drawer in the desk of the City Hall Police Station.

**Newark.**—The price of **City Bonds** has been marked down a point as a result of high rates for funds and of the suggestion of further expansion of such issues as indicated by municipal ownership inference shown in the balloting at Paterson, Elizabeth, Camden and Woodbury. Some recent savings banks purchases favored local corporation bonds in preference to county bonds paying the same interest.

At the recent **Election** the voters approved the proposed salary increases for firemen and policemen. An issue of \$300,000 bonds for improvements to the Essex County Park system was approved.

**Paterson.**—At the recent **Election** propositions to establish a municipal waterworks and a lighting plant were carried by large majorities.

**Perth Amboy.**—At the recent **Election** the citizens voted in favor of increasing the pay of the police.

**Plainfield.**—The members of the Good Government Club of South Plainfield have decided to incorporate an automobile company to operate a line of electric or gasoline **Omnibuses**. It is planned to establish a half-hour schedule in each direction. This action is due to the failure to get the railroad company to extend its lines so as to connect the two places.

**Woodbury.**—At the recent **Election** the citizens, by a large majority, voted to build and operate a municipal gas and electric-lighting plant. The cost of these plants is figured at \$40,000. The price for gas has been \$1.25 per thousand, and for arc lights \$93 per annum.

**NEW YORK, Buffalo.**—The city authorities are endeavoring to abate the **Smoke** nuisance, and with this end in view have secured information from St. Louis, Mo. A long communication from that city to Mayor J. N. Adam tells what has been accomplished there. In general the plan that has made Berlin smokeless is recommended. This scheme includes a law to make firemen stoke properly, the use of smokeless fuel and the better construction of boiler furnaces and chimneys. In St. Louis cases against 231 plants were prosecuted.

**New York.**—The first steps to begin the actual construction of the city's proposed new \$161,000,000 **Water System** were taken when bids were recently asked for the building of the first section of the huge aqueduct, ten miles in length. Four years are allowed for the completion of this section, and bids must be received by December 4. It is estimated that the cost of the first section will be about \$5,000,000. The first section of the aqueduct begins at Hunter's Brook, in Westchester, and goes to a point just beyond Peekskill.



At a recent **Fire Drill** at the factory of Krebs & Stiess, on Second avenue, a remarkable record was made; three thousand girls filed out of the factory in four minutes and ten seconds. The girls on the four lower floors left by the street exits and those on the three upper floors got out over the roofs.

Fire Commissioner Lantry has announced that by an order to take effect on December 1 the **firemen** in Manhattan, the Bronx, and Brooklyn will receive twelve hours more off duty. At present each fireman gets three leaves of thirty-six hours and three of twenty-four hours each month. By the new arrangement they will get four leaves of thirty-six hours and two of twenty-four hours. The Commissioner added that as soon as he gets more men he will give the force more extended leaves. In the outlying districts, including Staten Island and Far Rockaway, the men will hereafter get one day off in five instead of one in seven.

**Seneca Falls.**—The Board of Water Commissioners is preparing to rush plans and work on the proposed Municipal System of **Waterworks**. S. B. Booth, of Syracuse, has been engaged to make analyses of the waters of Cayuga Lake and Canoga Springs for the purpose of deciding on the location of the intake for the system. Engineer Morrison, of Syracuse, will design the system. Ample provision for fire protection, which has hitherto been faulty, will be made.

**Syracuse.**—By the terms of an agreement reached by Mayor Alan C. Fobes with the proprietors of the Glen Haven Hotel, the city will pay for the installation of a **Sewage System** and septic tank for the purpose of protecting the city's water supply at Skaneateles Lake. Bacteriological analyses of the waters of this lake do not as yet show any serious pollution.

**NORTH DAKOTA, Fargo.**—The construction of a **Filter** for the waterworks is being considered in order to render the water fit for drinking and bathing purposes. The supply would come as at present, from the river. It is believed that the improvement could be paid for out of the income from the waterworks if those who now use artesian or other water can be induced to take the filtered city water. It is estimated that citizens spend from \$20,000 to \$30,000 annually for private supplies of drinking water.

**OHIO, Columbus.**—The Columbus Police have ordered the saloon of Frank, discovered to be the headquarters of a disreputable Italian gang, to be closed, but he refuses and defies the police. The organization has terrified the Italians upon whose complaints the order against the saloon has been issued, and they have fled the city, leaving the police without any witnesses with which to proceed to a trial. In this dilemma the Chief of Police has placed an officer at the door of the saloon to warn all against the place, to advise them as to its character, and, if necessary, to prevent their entering it. How long the saloon can operate under such conditions remains to be seen.

**Youngstown.**—The garbage **Crematory** owned and operated by the city, which the Youngstown Sanitary Company desires to use in the incineration of the refuse gathered under the proposed contract, was established in 1898 at a cost of \$15,619.82. The contract for the erection of the plant was given the Dixon Sanitary Crematory Company, of Dayton, for \$12,300. The cost of a retaining wall was \$518, while the site was secured at a cost of \$1,500, and the filling was made at an additional cost of \$200, while the plumbing at the plant was an additional item of \$134,370. These figures represent the principal items in the total expenditure noted. The appraised value of the plant is now

\$20,344, according to the figures of the Board of Public Service, submitted to the City Auditor for this year. The lot is placed at \$2,200, the building at \$18,000, and the equipment at \$155.

**OKLAHOMA, Oklahoma City.**—A committee of Wichita, Kan., **Officials**, recently visiting Oklahoma City, found a fine city and learned much. Twenty-three miles of streets have been paved and contracts have been let for thirteen additional miles. Asphalt is used even in the alleys. A large amount of sewerage work is being done, concrete construction being extensively used.

**PENNSYLVANIA, Glassport.**—The authorities have begun a campaign against those who use **Profane Language** on the streets or in public places, and a novel plan has been adopted. The officers have been furnished with tablets and pencils to keep tab on all the swear words and profanity they hear, and a fixed list of fines has been so arranged as to "make the punishment fit the crime." For mild brands a fine of forty cents has been fixed, and for strong brands the users will have to pay sixty-seven cents each. Whether the scheme will have the desired effect remains to be proved.

**Philadelphia.**—Despite the fact that Director McKenty of the Department of Public Safety has asked the City Council to appropriate \$50,000 for the construction of ten new fire engines to displace those which are worn out from long usage and unable to give good service, the Trades League maintains that the city's **Fire Department** is far superior to the condition as represented by the recent report of the National Board of Fire Underwriters. An inspection of the fire apparatus has just been completed by the League, under the direction of an engineer. It has shown, the League declares, that the capacity of the engines was grossly misrepresented by the Underwriters, while the men who handle the engines proved themselves very efficient and not the inferior engineers the National Board asserted them to be. The League is now planning an exhaustive test of the high-pressure pumping station, with a view of having it extended to the growing sections of the crowded business districts.

**RHODE ISLAND, Bristol.**—The stock of the Bristol and Warren **Water Company** is now nearly all held by Col. Samuel P. Colt. The recent transfer of 2,300 out of a total of 2,500 shares completed the transaction. Samuel P. Colt was elected President and Charles H. Manchester, Treasurer. Now that the formalities are completed for the transfer of the waterworks arrangements will be made by which Col. Colt will meet the Water Committee of Bristol to state the terms upon which he will transfer the waterworks which he purchased for that purpose.

**SOUTH CAROLINA, Columbia.**—Each day now sees the new **Waterworks** system approaching completion, and Mr. Ludlow, the Engineer, states that it will be in operation by January 1 unless there should occur some delay which cannot be seen at present. The basins, filtration plant and steam pumping plant are now practically ready for business and all of the pipes from pumping station to reservoirs and on all the streets of the city have been laid. The large turbines for the pumping station on the canal are being installed. When they have been put in position the pumps will be next installed and this station will be ready for work. The intake pipe through which water will be drawn from the river is being constructed, and as soon as it has been built to the center of the stream the steam plant will be ready to begin pumping.

**TENNESSEE, Chattanooga.**—Through the foresight of Mayor Frierson provision has been made for the placing of **Telephone Wires** underground. The original contract of the telephone company provides that it has the right to erect poles on the streets and string wires thereon for telephone purposes. Recently the company applied to the Board of Public Works for a permit to put the wires approaching the new exchange underground. The Mayor then took the ground that if the company's franchise was construed simply as a contract to permit overhead wires in the street, the board had no power to permit the wires to be put under the street. If, on the contrary, it was construed as a general franchise for a telephone system in the streets, the board could grant the permit. Accordingly, the permit was granted and the company agreed, in writing, that its franchise should be construed as a general right subject to the general right of the city to require the wires to be put underground.

**TEXAS, Beaumont.**—The American De Forrest **Wireless Telegraph** station, on the block of ground in Cartwright Park granted by the city for that purpose, has been completed. The signal pole is 210 feet high; power is supplied by the lighting company at 110 volts which is slipped up to 20,000 volts.

**Bronte.**—Bronte, the future metropolis of Coke County, is to have **Electric Lights**; they are expected to furnish the illumination for the Christmas festivities. A good telephone system is already in operation, and the next thing, which is already being discussed, is waterworks.

**Dallas.**—Scarcity of Labor has greatly hampered the Street and Bridge Department as well as the **Contractors** working under the City Engineers. The Municipal Paving Company complains that it has not half enough men. The gas company makes the same complaint. The street railway company is using Mexican labor, which is not famous for the amount of work it can do. The shortage of cars and consequent difficulty in getting crushed rock for the bitulithic pavement is so great that the Mayor has taken the matter up with the railroad officials.

**Houston.**—**Stealing Electricity** is becoming a fine art. The method of procedure now practiced is to cut in behind a meter with a couple of wires. It is likely that the City Commissioners will be requested to enact a measure that will give them some special protection.

**VIRGINIA, Alexandria.**—The steam roller recently purchased by the city was put in operation on the crushed rock being used in making a roadbed on Commerce street, between King and Prince streets.

**Norfolk.**—The attention of the Board of Control having been called to the **Damage to Trees** on streets where underground conduits are laid, an order has been issued to the effect that for every tree destroyed a new one must be set out.

William Van Buskirk, who is in charge of the **Bertillon System** of identifying criminals in the Washington Police Department, has arrived in Norfolk for the purpose of giving instruction in the system. Detectives will be taught first, then patrolmen.

**Portsmouth.**—City officials are considering the selection of a location for a **Park**. What is desired is a location on the water front, and in view of the rapidly increasing values of such property it is believed that the land should be acquired at once. Citizens have had access to the Naval Hospital Park, maintained and controlled by the government. As this, however, is primarily for the use of convalescents it is thought that the city should have a park of its own.

**WASHINGTON, Tacoma.**—"The new **Milk Ordinance** is having a very salutary effect on the dairies supplying the city," says Dr. S. A. Rhoads, the Dairy Inspector. The measure has been in operation a month and a half and during that time, he states, vast improvement in conditions is shown. Very dirty stables and yards have been rendered less filthy and ordinary dairies have been brought up to a first-class state of cleanliness. The improvement is not only shown by analysis, but is conspicuous enough to be noticed by consumers.

**WEST VIRGINIA, Huntington.**—Chief of Police Dawson has issued orders to enforce the **Anti-Spitting Ordinance**. Conditions about the opera house have been particularly objectionable of late.

**WISCONSIN, Madison.**—That the regulation of the prices of gas and electricity in the cities of Wisconsin will be an important issue before the State Legislature when it meets in January, was evidenced a few days ago when a committee appointed in February, 1904, by the Common Council made its report in relation to prices at the capital. It is probable that a bill will be introduced in the Legislature this winter which will provide for the appointment by the Governor of a Commission, similar to the Railway Rate Board which will be empowered to investigate the officers and books of any gas or electric-light or power corporation for the purpose of determining the actual cost of the production. This Commission may be given the right to fix a price which is deemed just and reasonable. The Legislature will also be asked to confer upon the Supreme and Circuit Courts the power to enjoin, on the complaints of a consumer, where unreasonable rates have been charged for gas or electricity.

**Milwaukee.**—John I. Beggs, President of the street railway system, has presented to the Common Council a proposition to furnish the City of Milwaukee with **Electric Lights** at the cost price of municipal electric lights in Detroit, Mich. He claims that no municipal plant can be operated as economically as a private concern for the reason that it costs more for help, the work is not so thoroughly done, the supervision is less strict, the waste of material much greater, and naturally the cost of production greater.

**CANADA, Prince Albert.**—The City Council by a unanimous vote disposed of the W. S. Weeks Company's application for a **Street Railway** franchise by a resolution in favor of municipal ownership. The company offered to have at least two and a half miles of the line in operation in the city by the time the population was 8,000 and within three years to spend \$80,000. The Council agreed, however, that the city would within a few years be able to operate its own street railway at a profit and declined the offer.

**Toronto.**—The Level Crossings Committee is working on the proposition to compel the railroads to enter the city on a **Viaduct**. The City Engineer and other officials believe this to be the only adequate solution of the proposition. With the viaduct built, trains could enter and leave the city at twenty or forty miles an hour, instead of at four or six miles an hour, the speed to which they are at present restricted. Besides, at the rate Toronto is growing, a quick suburban service will be needed, which is impossible at present. As the object of the improvement is also to relieve the congestion of traffic along the Esplanade, part of the cost would have to be borne by the city. A local paper suggests the employment of an "expert engineer, the best on the Continent," to secure a definite and comprehensive report.



## PERSONALS

ABBOTT, CARL P., Assistant Engineer of the Queens County Water Company, has resigned to become Assistant Engineer of the Board of Water Supply of New York City, at White Plains.

ASSERSON, PETER C., Civil Engineer United States Navy, retired, with rank of Rear Admiral, and Henry R. Asserson, until recently Chief Engineer of Sewers, Borough of Brooklyn, have formed a partnership, with offices at 59 Pearl street, New York City.

CUTLER, J. G., Mayor of Rochester, N. Y., and City Engineer E. A. Fisher recently conferred with the Barge Canal Commission at Albany, regarding plans for constructing the canal in and near Rochester, and also talked with Hon. Walter N. Kernan relative to a proposed agreement between the city and the Mohawk Valley Company.

DAVIS, N. WILSON, of Harrisonburg, Va., has been selected as engineer for the proposed waterworks to cost \$30,000, and street improvements, to cost \$10,000, at Manassas, Va.

DILLON, B. F., has been re-elected by the City Council of Jacksonville, Fla., as a member of the Board of Bond Trustees of the city, and has again been made Chairman of the Board by a unanimous vote.

DORKIN, THOMAS BERNARD, of Newport News, Va., has been appointed Engineer in Charge of the Water Department of Norfolk, Va., succeeding Chief Engineer George W. Wright, Acting Superintendent, who resigned to accept a position with the Baltimore Refrigerating and Heating Company, Baltimore, Md. Hereafter, by order of the Board of Control, City Engineer Brooke will be consulting head of the department.

DOUGLAS, W. L., Engineer of Bridges of the District of Columbia, has reported to Col. John Biddle, the Engineer Commissioner, that it will be necessary to construct an entire new board roadway across the Aqueduct Bridge at a cost of \$5,000, and to expend \$1,500 on other bridges.

DUGGAN, THOMAS F., has been appointed Inspector of Carpentry and Masonry in the Bureau of Buildings, Borough of Bronx, New York.

FARNHAM, ARTHUR B., has been made City Engineer of Pittsfield, Mass., succeeding A. A. Fobes, who has become connected with the Engineering Department of the Stanley Works, of Pittsfield.

GREER, CHARLES, the new President of the Board of Councilmen of Louisville, Ky., was tendered a banquet on the night of his inauguration, Councilman T. Newton Shepard being toastmaster and Mayor Barth one of the guests.

HARPPER, JOHN, President of the Common Council of Detroit, Mich., is Acting Mayor of the city during the absence of Mayor George P. Codd in Europe. Mayor Codd will return about a week before the expiration of his term of office, January 1.

LOCKWOOD, WILLARD D., has resigned as Resident Engineer on the construction of the Cobbs Hill Reservoir of the waterworks of Rochester, N. Y., to accept a position with the Schofield Company, consulting and contracting engineers, of Philadelphia, Pa., and will be connected with Pittsburg work.

MACAFEE, JOHN, of Philadelphia, Pa., one of the promoters of the Kentucky Traction Company's consolidation, went to Frankfort, Ky., recently, to decide upon one of the sites selected by engineers for a power house and also to look into the street railway situation.

MACFARLAND, H. B. F., President of the Board of Commissioners of the District of Columbia, was the guest of honor of the Canadian Club of Ottawa, Canada, November 14, and delivered an address on the history and government of Washington. The Dominion authorities are considering a proposition to convert their Capital City into a National District, planned and governed along the same lines as the National Capital.

MARSHALL, WILLIAM C., former Mayor, of Belfast, Me., died recently, aged 80 years.

MOORE, GUSTAVUS, for twenty years Superintendent of the Gardiner Water District, Augusta, Me., has resigned on account of failing health, and the position has been filled by the election by the Trustees of Samuel D. Soule, of the Kennebec Heat and Light Company, formerly City Electrician of Augusta.

MORGAN, W. P., Captain of the Hook and Ladder Company, Augusta, Ga., recently resigned, and his brother, B. Morgan, Assistant Foreman, was promoted to the position.

NOYES, A. P., has been appointed City Engineer of Vallejo, Cal.

OLMSTEAD, HERBERT L., has resigned as Assistant Engineer with the Charles River Basin Commission, Boston, Mass., to become Assistant Engineer with the Board of Water Supply of New York City.

ROSS, P. SANFORD, a contractor of Jersey City, N. J., has been appointed a member of the Essex County Park Commission in New Jersey.

STREET, COL. H. M., G. M. Heiss, Levi Rothenberg, John W. Parker and C. C. Dunn have been appointed members of the Water Commission of Meridian, Miss., by the Joint Municipal Boards, the Commission having been created by a recent amend-

ment to the city charter to take full control of the first public utility to be owned by the municipality, the plant having been purchased from the Pittsburg owners for \$250,000.

STURTEVANT, W. J., for fifteen years General Superintendent of the Paducah Light and Power Company, Paducah, Ky., for the Stone and Webster Company, has been transferred to the main office of the company, Boston, Mass.

THORNTON, L. EARL, who for a year and a half was Assistant City Engineer of Washington, D. C., resigned to become City Engineer of Pensacola, Fla., his former home.

TYSONS, J. W., has been promoted to Secretary of the State Railroad Commission, of Washington, vice C. A. Snowden, resigned.

WEST, PROF. ANDREW FLEMING, dean of the Graduate School of Princeton University, has declined the offer of the Presidency of the Massachusetts Institute of Technology recently tendered him.

WIRTNER, JACOB, member of the Board of Water Commissioners, Dunkirk, N. Y., has resigned.

## Correspondence

Editor MUNICIPAL JOURNAL AND ENGINEER,

Flatiron Building, New York City.

GENTLEMEN:—This city has appointed a Charter Commission to formulate a new charter for our city. It occurred to me that you might be in possession of, or could obtain for us, data which would be useful to us in this work. Particularly do we wish to obtain copies of charters of cities from 10,000 to 25,000 population. Very truly yours,

F. M. G.

Secretary of the Charter Commission.

ANSWER.—There is considerable matter which should prove of great assistance to you in the formulation of your proposed new charter, one of the chief of which is the so-called Model Charter of the National Municipal League, more correctly known as the Municipal Program of said league, copies of which can be obtained of the Hon. Clinton Rodgers Woodruff, Secretary, North American Building, Philadelphia, Pa., for \$1. This is not phrased as a charter, but is an outline of the ideas to be embodied in the same, which was prepared by a committee of the National Municipal League and has been used as a basis for new charters by a considerable number of cities within the past four or five years, among which have been cities of Minnesota, Alabama, and Virginia. I do not suppose that the charter of the City of New York would be of any great assistance to you, but an outline of the same has been published by Matthew Hender, Albany, N. Y., and is sold by him at 75 cents. You will also find valuable ideas in a paper on Massachusetts Charter Legislation published in the "Proceedings of the National Municipal League" of 1902, which likewise can be obtained from Mr. Woodruff; also an article by Edward Kibler on the work of the Ohio Municipal Code Commission appeared in the "Proceedings of the National Municipal League" for November, 1899. A description of New York's new charter appeared in "Municipal Affairs" for September, 1900, published by the Reform Club, 52 William street, New York City. Also in the chapter on the City Charter of Frederick C. Howe's "The City," published by Charles Scribners Sons, New York, and some excellent ideas briefly stated. See also an article by Mr. Woodruff on "An American Municipal Program" in the "Political Science Quarterly" for March, 1903. I hope that in some or all of the above you will find ideas which will be of assistance to you in the work you have in mind.—EDITOR.

## Some Unusual Fires

BALTIMORE, MD.—Catonsville County Club house burned November 11. Cause, overheated furnace. Damage, \$50,000.

BOSTON, MASS.—Fire in building on Beverly street, November 10. This fire was erroneously reported to have burned out the Firestone Tire and Rubber Company. The company had vacated this building last February and is now located at 9 Park Square.

CHICAGO, ILL.—Docks of the Lehigh Valley Coal Company burned November 10. Damage, \$750,000.

MALDEN, MASS.—Malden City Lumber Yard burned November 9. Other fires and false alarms at the same time. It is believed that a daring attempt was made to burn and loot the city. Damage, \$100,000.

NAZERETH, PA.—Two stock houses of the Nazereth Cement Company, containing 20,000 barrels of cement, burned November 13. Damage, \$175,000.

SCRANTON, PA.—Six-story building belonging to Carter & Kennedy burned November 10. Cause unknown. Damage, \$500,000.

SOUTH HAVEN, MICH.—Two large buildings of the Old People's Charitable Home burned November 9. Damage, \$150,000.

WHITTIER, CAL.—Plant of the Whittier Gas Company burned November 3. Damage, \$30,000.

## THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

### BIDS ASKED FOR

| STATE                      | CITY            | RECEIVED UNTIL         | NATURE OF WORK  | ADDRESS INQUIRIES TO                                   |
|----------------------------|-----------------|------------------------|---|--|
| <b>Street Improvements</b> |                 |                        |   |  |
| New York                   | Brooklyn        | November 21, 11 A.M.   | Constructing asphalt plant  | Bird S. Coler, President.                              |
| Missouri                   | Kansas City     | November 22, 11 A.M.   | Constructing artificial stone sidewalks, portions 18 sts., brick one st., stone curb, 4 sts.  | E. A. Harper, City Engineer.                           |
| Louisiana                  | Rayne           | November 22            | Constructing 40,000 sq. yds. cement side walks and 7,000 ft. brick curbing  | R. B. Boettcher, Engineer.                             |
| Alabama                    | Montgomery      | November 26, noon      | Pave four streets, brick, bitulithic or asphalt.  | R. S. Williams, City Treasurer.                        |
| Alabama                    | Montgomery      | November 28            | Paving and improving several streets  | R. S. Williams, City Treasurer.                        |
| Pennsylvania               | South Strabane  | November 30            | Constructing 17,100 ft. of road   | J. W. Hunter, Harrisburg, Road Com'r.                  |
| Pennsylvania               | Williamsport    | December 1, noon       | Constructing crossing under R. R. tracks  | Jas. F. Fisher, City Engineer.                         |
| Indiana                    | Princeton       | December 1             | 1,190 ft. cement walk, 11 ft. wide, and concrete coping 18 x 18 inches  | Harry Embree, County Auditor.                          |
| Virginia                   | Norfolk         | December 3, noon       | Laying asphalt or bitulithic paving on concrete, also granite curb, Marshall ave.   | H. Hodges, Chm. Bd. Control.                           |
| Pennsylvania               | South Bethlehem | December 3, 8:30 P.M.  | Paving 37,000 yds. on four streets  | R. E. Neumeyer, Borough Eng'r.                         |
| Nebraska                   | Omaha           | December 8, noon       | Constructing 7 miles of road on six roads   | Douglas County Com'rs                                  |
| Ohio                       | Delaware        | December 8, noon       | Grading and paving with vitrified block, 1,260 sq. yds.; 1,015 ft. straight and 455 ft. circular curb and 871 cu. yds. excavation   | E. S. Mendenhall, Co. Surveyor.                        |
| Ohio                       | Troy            | December 12            | Laying 2,700 sq. yds. vitrified brick, asphalt, or bitulithic and 3,000 ft. curb  | H. J. Walker, City Engineer.                           |
| Ohio                       | Madisonville    | December 24            | Macadamizing Clason St. and Stewart Place   | J. A. Conant, Village Clerk.                           |
| Iowa                       | Oskaloosa       | January 1              | Paving street   | C. E. Monroe, City Clerk.                              |
| <b>Water Supply</b>        |                 |                        |   |  |
| Pennsylvania               | Philadelphia    | November 22            | Repair boilers, Frankford pumping station   | Jno. R. Hathaway, Dir. D. P. W.                        |
| Colorado                   | Grand Junction  | November 24, 3 P.M.    | Constructing Kannah Creek pipe line and distributing reservoirs   | I. N. Bunting, Mayor.                                  |
| Ohio                       | Willoughby      | November 26, noon      | Extending water mains on four streets   | L. Ryan, Clk. Bd. Pub. Affairs.                        |
| Iowa                       | Des Moines      | November 26, 2 P.M.    | Water distributing system for State fair grounds  | J. C. Simpson, Capitol Building.                       |
| Illinois                   | O'Fallon        | December 3             | Constructing water system   | John Seddon, Mayor.                                    |
| New York                   | New York        | December 4, 2 P.M.     | Constructing portions Peekskill Division, Catskill aqueduct, inc. 1,359,000 cu. yds. excavating, 256,000 cu. yds. concrete masonry, 340,000 bbls. Portland cement, 300,000 lbs. steel reinforcement, etc. | J. Waldo Smith, Chief Engineer, Board of Water Supply. |
| North Dakota               | Bismarck        | December 6, 2 P.M.     | Constructing water system at Indian School  | Commissioner of Indian Affairs, Washington, D. C.      |
| Texas                      | Fort Bliss      | December 10, noon      | Sinking 12-inch tubular deep well, installing pump and building 150,000-gallon steel tank on 70-foot trestle  | Lt. C. O. Schudt, Constructing Quartermaster.          |
| Louisiana                  | Jonesville      | January 2              | Sinking an artesian well  | T. M. Mathews, Mayor.                                  |
| Louisiana                  | New Orleans     | January 23, 3 P.M.     | 38,000 tons, 4 to 42-in. cast-iron pipe and 1,100 tons of specials; also for hauling and laying same  | Geo. G. Earl, Gen. Supt. Water Bd                      |
| <b>Sewerage</b>            |                 |                        |   |  |
| New York                   | Brooklyn        | November 21, 11 A.M.   | Three sewers, manholes, sewer basins, etc.  | Bird S. Coler, President.                              |
| Missouri                   | Kansas City     | November 22, 11 A.M.   | Constructing sewers, District No. 203   | E. A. Harper, City Engineer.                           |
| New York                   | New York        | November 22, 3 P.M.    | Building sewer in 204th Street, complete  | John F. Ahearn, Borough Pres.                          |
| Ohio                       | Norwood         | November 26, noon      | Excavating, sewer-pipe, brick and manhole covers, for sanitary sewers, District No. 3   | Jas. A. Stewart, Cincinnati, Eng'r.                    |
| California                 | San Jose        | November 26, 3 P.M.    | Constructing 61,314 ft. 6 to 24-in. pipe sewers, manholes, flush tanks, branches, etc.  | C. H. Pieper City Engineer.                            |
| Ohio                       | Norwood         | November 26            | Constructing sewers in two streets  | Jas. A. Stewart, Engineer.                             |
| District of Columbia       | Washington      | November 27, noon      | Constructing sewers   | H. B. F. Macfarland, Commissioner.                     |
| Pennsylvania               | Philadelphia    | November 27, noon      | Main sewers, 4 ft. 9 ins. in diameter, cost, \$75,000; extension, 3 ft. 6 in., appropriation, \$50,000  | Jno. R. Hathaway, Dir. D. P. W.                        |
| Maryland                   | Baltimore       | November 28, 11 A.M.   | Sewage pumping plant, complete  | Peter Leary, Jr., Board of Awards.                     |
| Louisiana                  | Alexandria      | November 28            | Extending drainage system 37 miles, cost, \$150,000   | Levee Board.   |
| Illinois                   | Rock Island     | December 1, 5 P.M.     | Sewers, drains, catch-basins, etc., District No. 2, Southwest Sewer System  | Wallace Treichler, City Eng'r.                         |
| Georgia                    | Eatonton        | December 1             | Constructing sewer system; cost, \$15,000   | E. H. Davis, Engineer.                                 |
| District of Columbia       | Washington      | December 3, noon       | Constructing sewer  | H. B. F. Macfarland, Commissioner.                     |
| North Carolina             | Greenville      | December 6, 10 A.M.    | Sewer system, 4 miles, 8 to 15 in. pipe   | J. L. Ludlow, Winston, Eng'r.                          |
| North Dakota               | Bismarck        | December 6, 2 P.M.     | Constructing sewer system at Indian School  | Commissioner of Indian Affairs, Washington, D. C.      |
| New York                   | West Seneca     | December 15, 2 P.M.    | Constructing sewer system, pumping and disposal plants; inc. 45,000 ft. 8 to 30-in. tile, also iron pipe to sewer, 1,000 acres; disposal plant to cover area 75,000 sq. ft., etc.                         | Dennison Fairchild, Buffalo, Eng'r                     |
| New York                   | Syracuse        | January 2              | Constructing sewer system, Elmwood Dist.  | H. H. Brewster, Engineer.                              |
| Ohio                       | St. Mary's      | January 30             | Complete sanitary sewer system, 14 miles  | Riggs & Sherman, Toledo, Eng'rs.                       |
| <b>Public Buildings</b>    |                 |                        |   |  |
| New York                   | New York        | November 22, 2 P.M.    | Alterations, furniture, etc., four armories   | George B. McClellan, Mayor.                            |
| New York                   | New York        | November 26, 11 A.M.   | Additions, alterations, etc., school bldgs.   | C. B. J. Snyder, Superintendent.                       |
| Illinois                   | Chicago         | November 26, 1:30 P.M. | Erecting Juvenile Court Building  | Wm. McLaren, Sup't Pub. Serv.                          |
| New York                   | Brooklyn        | November 27, 10 A.M.   | Extension, nurses' home, Kingston Ave. hosp.  | Thomas Darlington, Health Dept.                        |
| Virginia                   | Norfolk         | November 27, 10 A.M.   | Power house, oil house, etc., at navy yard  | H. T. B. Harris, P. M. G., U. S. Navy.                 |
| Ohio                       | Cleveland       | November 28, noon      | Industrial bldg., Cleveland State Hospital  | Washington, D. C.                                      |
| Alberta                    | Edmonton        | November 28            | Constructing Dominion public building   | A. B. Howard, Sec'y Bd. Trustees                       |
|                            |                 |                        |   | Fred Gelines, Sec'y D. P. W.                           |



## Public Buildings—Continued

|                       |                   |                      |  |  |
|-----------------------|-------------------|----------------------|--|--|
| District of Columbia. | Washington        | November 29, 3 P. M. | Buildings for Reform School.   | C. S. Noyes, Board Trustees.                         |
| Vermont.              | Fort Ethan Allen. | November 29, 2 P. M. | Remodeling bldgs., electric lighting, etc.   | Lt. M. G. Holliday, Quartermaster                    |
| Michigan.             | Jackson.          | November 30.         | Erecting \$110,000 high school.  | L. H. Field, Jr., Architect.                         |
| Mexico.               | Vera Cruz.        | December 1.          | Remodeling City Hall, cost, \$150,000; erecting general prison; cost, \$125,000.             | City Engineer.                                       |
| New Mexico.           | Santa Fe.         | December 3, 2 P. M.  | Brick dormitory, mess hall, bakery and warehouse, with electric-light, etc. Santa Fe School. | Clinton J. Crandall, Superintendent.                 |
| North Carolina.       | Halifax.          | December 3.          | Erecting County jail.  | T. W. Fenner, County Clerk.                          |
| Michigan.             | Ovid.             | December 5.          | Erecting two-story and basement high school.   | Fisher Bros., Pontiac, Archs.                        |
| North Dakota.         | Bismarck.         | December 6, 2 P. M.  | Constructing dormitory and employees' quarters, also warehouse of brick, all complete.       | C. F. Larabee Acting Indian Com'r, Washington, D. C. |
| Connecticut.          | Hartford.         | December 9, noon.    | Constructing State armory and arsenal.   | Benj. W. Morris, New York, Arch.                     |
| West Virginia.        | Hinton.           | December 10.         | Erecting high school.  | J. B. Stewart, Huntington, Arch.                     |
| Florida.              | West Palm Beach.  | December 11.         | Erecting \$50,000 school.  | Guy Metcalf, Sec'y Bd. School Trus.                  |
| Louisiana.            | Shreveport.       | December 20.         | Erecting \$75,000 City Hall.   | C. G. Rives, City Comptroller.                       |
| Georgia.              | Cordele.          | December 31.         | Two-story Court House and jail; cost, \$80,000.  | Lockwood Bros., Columbus, Archs.                     |
| Virginia.             | Richmond.         | February 1.          | Fire-proof high school building, 180 x 220 ft.; estimated cost, \$500,000.                   | Charles W. Bryant, Architect.                        |
| North Dakota.         | University.       | February 5.          | Library building State University, cost, \$60,000.   | J. W. Wilkerson, Sec'y Bd. Trustees                  |
| Ohio.                 | Marion.           | April 1.             | Four-story addition to school; cost, \$10,000.   | Geo. B. Christian, Jr. Clerk., Bd. Ed.               |

## Bridges

|                |                    |                       |  |   |
|----------------|--------------------|-----------------------|--|---|
| Georgia.       | Gainesville.       | November 24.          | Two wooden bridges, with stone foundations.                                      | W. N. Dyer, Road Com'r.                             |
| Missouri.      | Sampson.           | November 26.          | 50-ft. steel bridge with stone abutments.  | Bd. Co. Com'rs, Independence.                       |
| Pennsylvania.  | Philadelphia.      | November 27, noon.    | Constructing bridge; schedule A.   | George S. Webster, Chief Engineer.                  |
| California.    | Gilroy.            | November 29.          | Concrete bridge, two 30 and one 40-ft. spans; estimated cost, \$15,000.          | J. G. McMillan Co., San Jose.                       |
| Ohio.          | Circleville.       | November 30, noon.    | Riveted low truss bridge, 60 feet long.  | J. H. Sweetman, Engineer.                           |
| Kansas.        | Ottawa.            | December 1.           | Constructing piers for bridge.   | Henry Anthony, County Clerk.                        |
| Florida.       | De Funiak Springs. | December 3.           | Constructing steel bridge.   | W. L. Cawthon, Chm. Bd. Com'rs.                     |
| New Mexico.    | Roswell.           | December 3.           | Constructing bridge.   | W. M. Atkinson, Chm. Co. Com'rs.                    |
| Indiana.       | Newport.           | December 15, 10 A. M. | Building highway bridge over Wabash River.                                       | H. T. Payne, County Auditor.                        |
| Tennessee.     | Carthage.          | December 15, noon.    | Constructing 600-ft. steel highway bridge.                                       | W. E. Myer, Agent.                                  |
| Massachusetts. | Fall River.        | December 17, noon.    | Building steel bridge, 920 ft. long, stone piers and abutments, approaches, etc. | Jas. F. Jackson, Chm. Jont Bd. State House, Boston. |

## Miscellaneous

|                       |               |                         |  |  |
|-----------------------|---------------|-------------------------|--|--|
| New York.             | Brooklyn.     | November 22, 3 P. M.    | Constructing fountain, Prospect Park.  | Moses Herrman, Dep't Parks.                                    |
| New York.             | New York.     | November 22, 3 P. M.    | Constructing portion, Colonial Park.   | Moses Herrman, Dep't Parks.                                    |
| Wisconsin.            | Keshena.      | November 23, 2 P. M.    | Electric-light plant at Green Bay School.  | Shepard Freeman, Superintendent.                               |
| Louisiana.            | New Orleans.  | November 24.            | Strengthening old and building new piers at Naval Station.   | Mordecai T. Endicott, Navy Dept., Washington, D. C.            |
| Massachusetts.        | Boston.       | November 24.            | Dredging at navy yard.   | Mordecai T. Endicott, Navy Dept., Washington, D. C.            |
| Pennsylvania.         | Philadelphia. | November 24.            | Building retaining wall south of reserve basin, League Island navy yard.   | Mordecai T. Endicott, Navy Dept., Washington, D. C.            |
| District of Columbia. | Washington.   | November 27, 10 A. M.   | Furnishing 150,640 incandescent lamps at six navy yards; schedule, 255.  | Bureau of Supplies and Accounts, Navy Dept., Washington, D. C. |
| Indiana.              | Kokomo.       | November 28.            | Electric telegraph fire alarm system.  | J. A. Burkhalter, Bd. Pub. Works.                              |
| District of Columbia. | Washington.   | November 30, 2 P. M.    | Installing heating system, Arlington, Va. National Cemetery.   | Depot Quartermaster.   |
| Minnesota.            | Minneapolis.  | November 30, 7:30 P. M. | Furnishing 5,500 incandescent gas and 400 gasoline street lamps.   | L. A. Lydiard, City Clerk.                                     |
| Minnesota.            | Minneapolis.  | November 30, 7:30 P. M. | Lighting streets during 1907.  | L. A. Lydiard, City Clerk.                                     |
| Washington.           | Tacoma.       | December 1, 11 A. M.    | Two first-size hose wagons; one second-size fire-engine, and one aerial ladder truck.                              | Owen Woods, Com'r Pub. Wks.                                    |
| South Carolina.       | Charleston.   | December 1.             | Electric elevator bldg. No. 5, navy yard.  | Mordecai T. Endicott, Navy Dept., Washington, D. C.            |
| New York.             | Peekskill.    | December 1.             | Building Putnam and Westchester Traction Co. line to Oregon, 3 1/2 miles.  | John S. Ladd, President.                                       |
| South Carolina.       | Rock Hill.    | December 1.             | Installing electric-light system and steam plant to light city, population, 8,000.                                 | C. S. May, City Clerk.   |
| Connecticut.          | Hartford.     | December 3, 11 A. M.    | Constructing chemical and hose wagon, complete, also for altering hose wagon into combination chemical hose wagon. | Charles E. Parker, Sec'y Board of Contract and Supply.         |
| Ohio.                 | Cleveland.    | December 3.             | Constructing, maintaining and operating street railway in city.  | Peter Witt, City Clerk.  |
| New York.             | Brooklyn.     | December 6, 3 P. M.     | Erecting shelter houses in three parks.  | Moses Herrman, Park Dept.                                      |
| Virginia.             | Norfolk.      | December 11, 10 A. M.   | Steel store-house 190 ft. 10 ins. long with railroad track, fresh water tank, etc.                                 | Bureau of Supplies and Accounts, Navy Dept., Washington, D. C. |
| Ohio.                 | Cincinnati.   | December 12, 1 P. M.    | Reconstructing, in concrete, conduit, guide and guard cribs, Lock No. 4.   | Maj. J. G. Warren, Custom House.                               |
| Mississippi.          | Greenville.   | December 31.            | Building 61-mile line for Greenville, Leland and Rolling Forks Co. Railway.  | W. R. Barksdale, Memphis, Tenn., President.                    |

## STREET IMPROVEMENTS

Mobile, Ala.—The Southern Bitulithic Company, Nashville, Tenn., has been awarded contract for paving 40,670 square yards bitulithic, on concrete foundation, at \$87,441.

Little Rock, Ark.—Joseph McCoppen has been awarded contract to construct Louisiana and Ashley streets, at \$1.90 per square yard for the pavement and 40 cents a yard for excavation; Coffeyville block will be laid on a tar filler.

Oakland, Cal.—Council has adopted resolution announcing its intention to have the following improvements made: To sewer Twelfth street from Grove to Jefferson streets; to sewer East Twenty-second street from Ninth to Tenth avenues; to sewer Herzog street from Sixty-second to Sixty-third streets; to sewer Eighth street from Franklin street to Broadway; to grade, etc., Twentieth avenue from East Nineteenth to East Twentieth streets; to macadamize Miles avenue from Telegraph avenue to Hudson street; to macadamize the west half of Linden street from Thirty-seventh street northerly; to macadamize the north half of Apgar street from Market street westerly; to macadamize Thirtieth avenue between East Seventeenth street and East Twenty-first street; to sidewalk Broadway from Twentieth to Twenty-second streets.

Oakland, Cal.—Contracts for the following street work have been awarded: grading, curbing and macadamizing Fifty-seventh street and Dover street, to Blake and Bilger Company; sewerage Miranda street from Vicente street to a point 140 feet easterly, to Michael Murphy; grading, curbing, macadamizing, etc., West Moss avenue and Broadway, to Blake and Bilger; constructing sewer in Pleasant Valley avenue and Lake avenue, to Piedmont Paving Company; grading, curbing and macadamizing Canning street from Sixty-third street to Fifty-eighth street, to Blake and Bilger.

Pasadena, Cal.—By unanimous vote the County Supervisors have decided to call for bids for constructing the proposed Pasadena-Los Angeles boulevard; it will have a uniform width of 100 feet; Stone and Blake, owners of the Short Line Villa tract, will build 2,500 feet of the boulevard, where it passes that subdivision.—Address County Surveyor Noble.

Thomasville, Ga.—Bonds, \$90,000, will be issued for paving purposes.

Champaign, Ill.—The City Engineer estimates that \$200,000 worth of paving will be constructed next year.

Gary, Ind.—The Illinois Improvement and Ballast Company, Chicago, Ill., has been awarded a contract by the Town Board for paving, calling for an outlet of \$600,000; the

contract calls for cinder filling, a granite-top dressing and a combination curb wall and cement sidewalks.

Paoli, Ind.—The contract for constructing 7,563 feet of gravel road in the county was awarded, November 7, to Elwood Johnson, of Orleans, for \$2,875.—A. B. Ham, County Auditor.

Ashland, Ky.—Bonds, \$38,000, have been sold for improving streets.

Louisville, Ky.—Humphich and Staebler will pave several alleys with brick, for \$18,500.

Carlisle, Mass.—John A. Gaffey, Medford, Mass., has been awarded contract for constructing section of State road, for \$2,363.

Hastings, Mich.—A special election will be held to decide the question of issuing \$30,000 bonds for paving purposes.

St. Paul, Minn.—About \$115,000 will be spent in improving Afton road, Mississippi, Dale and Concord streets, and North St. Paul road.

Clinton, Mo.—Bids will soon be asked for paving twenty-five blocks of streets with brick.—W. H. Shackelford, Mayor.

St. Louis, Mo.—Broadway, Fall and Gano avenues will be paved.

Buffalo, N. Y.—The German Rock Asphalt and Cement Company has been awarded contract to pave Goethe street, between Broadway and Reiman street, for \$9,310; Klaus street, between Johns and Metcalfe streets,

\$3,830; Alabama street, between South street and the Erie Railroad Company's property, \$3,910; and Johnson street its length, from Seneca street, \$7,960; the Barber Asphalt Paving Company will pave Vincennes street, between Tecumseh and Mackinaw streets, for \$8,576.—F. G. Ward, Commissioner of Public Works.

**Winston-Salem, N. C.**—The city is considering the expenditure of \$200,000 for road improvements.

**Akron, O.**—Council is soon to take action on the question of paving Cuyahoga street; the pavement will either be brick or macadam; estimated cost, \$50,000.—City Engineer Payne.

**Canton, O.**—Turnbull Bros. have been awarded contract for paving East Tuscarawas and Lake streets; Hadley brick with a tar filler and sandstone curbing will be used on the East Tuscarawas job and Metropolitan block on East Lake street, with a tar filler; Berea flagstone sidewalks and sandstone curbing.

**Dayton, O.**—Preliminary legislation for the improvement of Orchard, Pontiac, Grant, Light, and one or two other streets by grading and setting combined curb and gutters has passed Council; Council has passed resolutions to pave Williams street, from Fifth street to Wolf creek, estimate 7,400 square yards; and Springfield street from the Hydraulic Race to Jurist street, estimate, 12,000 square yards.—Frederick J. Cellarius, Civil Engineer; C. P. Floyd, Clerk of Council.

**East Liverpool, O.**—The Board of Public Service has ordered new pavement laid in Franklin street.—J. C. Kelly, City Engineer.

**Lancaster, O.**—Jas. Littrell has the contract for the High street sewer; it will be of 2-foot tiling and will be about 300 feet long.

**Martins Ferry, O.**—Council has definitely decided on the paving of fourteen streets with the opening of the spring season; the Engineer will immediately prepare the plans, after which they will be advertised.

**Niles, O.**—The Good Roads Commissioners have issued \$64,000 4 per cent. bonds for the improvement of roads.

**Sandusky, O.**—M. J. Callan has been awarded the contract for paving North Depot street, at \$4,848; Wassal brick will be used.

**Toledo, O.**—The ordinances to pave Lincoln avenue with Logan block and Berea curb, and Colburn street in the same manner, and for improving the alley between Summit and St. Clair streets with Massillon blocks on concrete foundation have passed Council.—Oren Dunham, Clerk.

**Portland, Ore.**—Council is arranging to pave Hubbard street.

**Charleroi, Pa.**—The Charleroi Paving and Construction Company has been awarded contract for paving portions of Second, Seventh, Eighth, and Ninth streets, at \$9,815.

**Lindsey, Pa.**—Bids will soon be received for grading and paving 4,103 feet of State road.—John Jenkins, Clerk; C. F. Hamilton, Franklin, Pa., Engineer.

**Philadelphia, Pa.**—A parkway will be constructed from Logan Square to Fairmount Park; cost \$250,000.

**Punxsutawney, Pa.**—The city contemplates brick and macadam paving, cost \$28,000.—W. P. Coulter, Engineer.

**Columbia, S. C.**—About \$50,000 will be expended on street improvements.

**Marshall, Texas.**—About \$100,000 will be spent on improving streets.

**Seattle, Wash.**—East Jefferson street will be paved from Broadway to Twenty-first street, and Sixteenth, Seventeenth, and Eighteenth streets will be paved from Yesler Way to East Columbia; estimated cost, \$190,000.

**Madison, Wis.**—The city will macadamize Livingston and Blount streets from Johnson to Washington and Dayton from Blair to Livingston.

**Milwaukee, Wis.**—The proposition to issue \$75,000 bonds for building a viaduct to connect Highland boulevard and Washington Park carried.

**Lebanon, Va.**—The Board of Supervisors of Russell County desires to issue and sell county bonds for making permanent improvements in public roads.—R. G. Gletheher, Clerk of Board.

**Neeah, Wis.**—Council is preparing to pave North Commercial street.

## SEWERAGE

**Greenville, Ala.**—Callahane and Vandervoort, Jamestown, N. Y., have contract to construct between four and five miles of sewers, at \$8,411.—Arthur Pew, Atlanta, Ga., Engineer; J. J. McMullan, Mayor.

**Apalachicola, Fla.**—The city has appropriated \$10,000 to construct sewerage system.

**Bainbridge, Ga.**—Bosler and Flynn have been awarded contract to construct new sewerage system, at \$31,000; there were twelve bidders.—Arthur Pew, Atlanta, Engineer.

**Pekin, Ill.**—Brick and pipe sewers will be constructed, at a cost of about \$112,000.—Benjamin F. Smith, Pekin, Engineer.

**Pinckneyville, Ill.**—Harper Brothers, of East St. Louis, Ill., have completed plans for sewer system to cost \$50,000.—Geo. F. Mead, Mayor.

**Indianapolis, Ind.**—Plans have been ordered by the Board of Public Works for the construction of a large trunk sewer in North Indianapolis; cost, \$125,000.—Charles Brown, Engineer.

**Oelwein, Ia.**—Contract for constructing sewer in First and Fifth streets has been let to R. C. De la Hunt, Cedar Rapids, Ia., for \$2,950.

**Limerick, Ky.**—Council has under consideration the issue of bonds for the construction of sewers.

**Newport, Ky.**—Bids will be received for constructing tile sewers; cost, \$25,000.—P. J. Krebs, Clerk.

**Winchester, Ky.**—Bonds, \$40,000, have been voted for a sewerage system, including disposal plant; seven and one-half miles of sewer will be built at the outset.—Address Sewerage Commission.

**Baltimore, Md.**—M. A. Talbot Company, was the lowest bidder for the construction of about two miles of concrete sewers, 12 feet in diameter; estimated cost, \$300,000; work to be completed in 350 days.—Calvin W. Hendrick, Chief Engineer, Sewerage Commission.

**Hart, Mich.**—Council has decided to construct sewers, for which purpose bonds have been issued.—F. F. Wetmore, County Surveyor; Irvin Daybrash, Village Clerk.

**River Rouge, Mich.**—M. F. Bramley, Cleveland, O., has contract for constructing sewer system and receiving basins, for \$148,500.

**Joplin, Mo.**—The matter of constructing a complete sewer system carried.

**Trenton, Mo.**—D. B. Kelly, of St. Joseph, has been awarded contract to construct sewer in District No. 4, at \$7,401.39.—V. S. Rynearson, City Clerk.

**Jersey City, N. J.**—The city has appropriated \$210,000 for a relief sewer to be constructed in the "Horseshoe" section.—Charles Van Kewren, Chief Engineer; George P. Bouton, City Clerk.

**Akron, O.**—An ordinance has been passed authorizing issue of \$31,000 sewer bonds.

**Barberton, O.**—The contract for the construction of the Third street storm sewer has been awarded Paul and Henry, at \$1,400.

**Delaware, O.**—Council will shortly take action on the construction of sanitary sewers in Lake, Winter and Central avenues and Estell street.

**East Liverpool, O.**—A sanitary sewer system is to be constructed west of Fourth street.

**Findlay, O.**—The improvement of Clinton street by the construction of a sewer south to the Lake Erie and Western road has been determined on; a bond issue will be authorized.—J. C. Elie, City Clerk.

**Lorain, O.**—An ordinance is before Council for issue of \$16,000 bonds for constructing sewers in Penfield avenue.

**Portsmouth, O.**—The estimate of the cost of the Bond street sewer is \$14,000; bond issues will probably be authorized for constructing a branch of Robinson avenue sewer and for constructing the sanitary sewer to the Drew shoe factory, costing \$20,000.

**Salem, O.**—The State Board of Health has approved the plans of Engineers Chapin and Knowles, of Canton, for the proposed sewage disposal plant.

**Toledo, O.**—Bids will be received, December 5, for the purchase of \$75,478 5 per cent. sewer bonds.—R. G. Bacon, City Auditor.

**Wapakoneta, O.**—Edward Howell has been awarded contract for constructing the Delsel-Womer sewer; the Street Commission is planning to construct a large number of sidewalks early in the spring.

**Shawnee, Okla.**—The voters have authorized an issue of \$165,000 bonds for waterworks extension and sanitary sewer system.

**Portsmouth, Va.**—The city contemplates constructing sewer in the Fifth Ward, for which \$110,000 bonds will be issued; the installation of electric light plant is also being considered.—L. P. Slater, City Clerk.

**Wytheville, Va.**—The Wytheville Sanitary Company will install sewers.—A. F. Brown, Culpeper, Engineer.

## WATER SUPPLY

**Florence, Ala.**—The Florence Water Company has been incorporated with \$125,000 capital stock.—A. A. Berger, President; N. C. Elting, Vice President and Secretary; T. A. Howell, Treasurer.

**North Birmingham, Ala.**—The city has issued \$40,000 bonds for enlarging the waterworks and electric light plant.—E. J. Woods, Chairman Committee.

**Washington, D. C.**—Bids were received by the District Commissioners for the following supplies: (a) 3,000 ¾-inch corporation cocks; (b) 500 1-inch same; (c) 3,000 curb cocks, ¾-inch; (d) 200 1-inch same. Bids were as

follows (unit prices): A. P. Smith Manufacturing Company, (a) 92 cents, (b) \$1.50, (c) \$1.36, (d) \$1.92; G. and W. Manufacturing Company, New York, (a) \$1.24, (b) \$1.84, (c) \$1.74, (d) \$2.48; Mueller Manufacturing Company, Decatur, Ill. (awarded contract), (a) 79½ cents, (b) \$1.18, (c) \$1.24½, (d) \$1.72; Thomas Somerville Company, 316 Thirteenth street, N. W., Washington, (a) \$1.16, (b) \$1.55, (c) 85 cents, (d) \$1.25.

**Dallas, Ga.**—Bids will be received December 1, 3 p. m., for \$20,000 5 per cent. 20-year semi-annual water bonds.—N. O. Hitchcock, Mayor.

**O'Fallon, Ill.**—Council is considering the question of putting in a municipal waterworks system, to cost between \$13,000 and \$20,000.

**Atoka, I. T.**—The O'Neil Engineering Company, Dallas, Tex., has been awarded contract to construct the waterworks system.—W. Bassett, Mayor.

**Carrollton, Ky.**—The citizens have voted to issue bonds for improving water system.—W. F. Schuerman, Manager.

**Charlestown, Ky.**—Steps are being taken to inaugurate a system of waterworks if a supply can be found; estimated cost, \$60,000, of which \$40,000 has been raised.

**Owensboro, Ky.**—The citizens have voted \$60,000 waterworks bonds; they will be issued about January 1.

**Versailles, Ky.**—Council has decided to call an election to vote on issue of \$60,000 bonds for a waterworks and sewerage system; the proposition will undoubtedly carry.

**Winchester, Ky.**—Bonds, \$40,000, have been voted for sewer system; the work will be pushed at once.

**Hammond, La.**—Bids will be received, December 4, for the purchase of \$40,000 4 per cent., 30-year waterworks bonds.—S. L. Powell, Mayor; J. B. Adams, City Clerk.

**Galesburg, Mich.**—A waterworks system will be constructed, including the laying of pipes in every street and installing hydrants.

**Brandon, Miss.**—The citizens have voted \$25,000 bonds for waterworks system.

**Bertrand, Neb.**—Bonds, \$12,000, have been authorized for waterworks.

**Scribner, Neb.**—Geo. W. Craig and Company, of Omaha, have been awarded contract to construct waterworks plant.

**North Platte, Neb.**—Council has under consideration an issue of \$90,000 bonds for constructing waterworks.

**Lorain, O.**—The Board of Public Service has awarded the U. S. Cast Iron Pipe Company the contract for furnishing water mains to the city.

**Massillon, O.**—The proposition to issue bonds for waterworks carried.

**Maumee, O.**—This village has defeated the proposed \$40,000 bond issue for the construction of a waterworks system by two votes; it is likely that negotiations will now be completed whereby water will be furnished by the city of Toledo.

**Shawnee, Okla.**—The citizens have voted to issue \$165,000 in bonds to extend waterworks and construct system of sanitary sewers.

**Caldwell, Tex.**—Council has purchased a water system from a private company for \$14,000; improvements will be made.

**Martinsburg, W. Va.**—Council has decided to lay 2,000 feet of 6-inch water main and 400 feet of 10-inch water main.—P. R. Harrison, Mayor; P. W. Leiter, City Clerk.

## LIGHTING AND ELECTRICITY

**Demopolis, Ala.**—City is considering the installation of an electric-light and power plant.—L. Kauffman, City Clerk.

**Mobile, Ala.**—The McCleary Electric Company, Detroit, Mich., submitted the lowest bid for the proposed municipal electric-light plant.—S. M. Hinckley, Chief Engineer.

**Argenta, Ark.**—The Argenta Light and Power Company has been granted a franchise to furnish the city lights.—K. M. Griffiths, E. M. Ramsey, and Vernon Ramley, Incorporators.

**Pasadena, Cal.**—The C. G. Moore Company, of Los Angeles, has received the contract, at \$36,000, for installing the municipal electric-light plant.

**Greeley, Col.**—The Greeley Gas and Electric Company has received franchise to enlarge its plant.

**Pelham, Ga.**—The town will expend \$40,000 in municipal improvements, consisting of waterworks, electric light, and ice plants; engineers are asked to submit propositions.

**East St. Louis, Ill.**—The East St. Louis and Suburban Railway Company, Main and Harrison streets, Belleville, Ill., has purchased a site and will erect a power station for the purpose of distributing power to the Belleville city street car lines; when the system is completed the Walnut Hill branch will be extended to Highland addition.

**Pekin, Ill.**—The local electric light company is preparing to equip its entire plant with new and modern machinery.

**Converse, Ind.**—A movement is under way to organize a \$50,000 stock company for



the development of water power; the plan is to put in an electric plant to furnish current for electric-light, heat and power in the cities and towns of this section and for use on interurban lines; Wabash, Marion, Peru, Kokomo, Huntington, Converse and many smaller towns could be reached.—Address S. P. Shultz.

**Liberal, Kan.**—The Liberal Light and Power Company will build power plant.—T. J. McDermot, Engineer.

**Carrollton, Ky.**—The city has voted \$25,000 bonds for the purchase and enlargement of electric-light plant and improvement of waterworks.—W. F. Schuerman, Mayor.

**Franklin, La.**—Council proposes to establish an electric-lighting plant.—John C. Lewis, Mayor.

**Brandon, Miss.**—A \$25,000 bond issue has been authorized, to be used in the installation of municipal waterworks and electric-light plants; Kirkpatrick and Johnson, of Jackson, Miss., will prepare plans for the two plants.

**Vicksburg, Miss.**—Council has granted franchise to Harry K. Johnson for the construction and operation of an electric-light plant, to cost \$250,000.

**Granby, Mo.**—Franchise has been granted to Hal. Campbell, of Joplin, to establish a light, water and ice plant; work will begin within ninety days.

**Thompson, Mont.**—Arrangements have been completed for the construction of a water-power plant.

**Madisonville, O.**—Improvements, to cost about \$17,000, will be made to the electric light plant.

**Toledo, O.**—Attorney George A. Bassett has filed an ordinance asking for a franchise, for the operation of a heating and power plant.—Oren Dunham, Clerk of Council.

**Gleason Station, Tenn.**—It is reported that the city is considering the installation of an electric light plant.

**Provo, Utah.**—The Committee on Water and Electric Lights has under consideration the construction of a small plant to generate electricity with the power from the waterworks system; estimated cost, \$12,000.

**Spokane, Wash.**—The Washington Water-Power Company will erect another power plant, at an estimated cost of about \$800,000.

**Superior, Wis.**—The city of Superior has voted to install a municipal lighting plant.

**Saratoga, Wyo.**—The electric light station at this place, recently damaged by fire, will be rebuilt.

**Ottawa, Ont.**—The city of Ottawa has passed a by-law to raise \$50,000 for the extension of the municipality's electric light plant.

## FIRE EQUIPMENT AND SUPPLIES

**Jacksonville, Fla.**—Bids were received for 2,000 feet of rubber-lined fire hose, as follows: The Chicago Fire Hose Company, "Glenwood" hose, 90 cents per foot, guaranteed to withstand a pressure of 400 pounds and to last five years; Gutta Percha Rubber Manufacturing Company, of New York, 70 cents for Rescue brand, 400 pounds pressure, forty months' guarantee, 80 cents for Princeton brand, 400 pounds, fifty months, 85 cents for Baker brand, 400 pounds, sixty months; Eureka Fire Hose Company, of New Jersey, \$1 per foot for first quality, 500 pounds, five years' guarantee, Paragon brand, 90 cents, 400 pounds, five years, Red Cross brand, 80 cents, 400 pounds, four years, Peerless brand, 80 cents, 400 pounds, four years; The Fabric Fire Hose Company, of New York, Keystone, 90 cents, 400 pounds, five years, Patrol, 80 cents, 400 pounds, four years, Quadro, \$1, 500 pounds, five years, Dilos, 90 cents, 400 pounds, five years, Horse-shoe, 80 cents, 400 pounds, four years; Boston Woven Hose and Rubber Company, through the Florida Hardware Company, agents, Cambridge brand, 85 cents, 500 pounds, seventy-two months, Middlesex, 75 cents, 500 pounds, sixty months, Dauntless, 65 cents, 400 pounds, sixty months.

**Des Moines, Ia.**—Council has decided to purchase 2,000 feet of hose.

**Monroe, Ia.**—A disastrous fire occurred at this place; the town is without fire protection; apparatus will probably be purchased.

**Louisville, Ky.**—George Rommell has been awarded contract to erect new engine house, 316x290 feet, at 17,000.—Thompson and Bonse, Architects.

**Munith, Mich.**—The village is without fire protection; Council proposes to secure fire protection.

**Waseca, Minn.**—The committee of the Fire Department has recommended that 500 feet of hose be purchased.

**Vicksburg, Miss.**—The city government has voted to purchase hose reel and 1,000 feet of hose.

**Franklinville, N. Y.**—The Fire Department is raising money for the purchase of additional fire apparatus.

**Lorain, O.**—The matter of issuing \$12,500

bonds for fire protection is under consideration.

**Toledo, O.**—The Finance Committee has approved and the Council passed an appropriation of \$60,000 to improve the Fire Department; it is proposed to purchase a fourth size steamer, two hook and ladder trucks, rebuild one hook and ladder truck, and purchase one aerial hook and ladder truck; the fire alarm telegraph boxes will also be improved.

**Wellsville, O.**—An appropriation of \$5,000 has been made to purchase a site for the erection of a new Fire Department building.

**Shawnee, Okla.**—Estimates are being received by Council for the purchase of a hose wagon, chemical engine, and 2,000 feet of hose.

**Freemansburg, Pa.**—Arrangements are being made to organize a fire company and to build and equip a fire house.—Wm. Seeds, Secretary.

**Philadelphia, Pa.**—Council has been asked to purchase ten new fire engines.—Address Director of Public Safety.

**Reading, Pa.**—The Washington Hook and Ladder Company has been organized.—Arthur Larkin, Sr., President.

**Sioux Falls, S. D.**—A volunteer fire company is being organized.

**Nashville, Tenn.**—The Board of Public Works has petitioned for \$20,000 additional for the Fire Department, in order to purchase equipment and for additional firemen.

**Austin, Tex.**—Fire Chief Woodward recommends the purchase of several modern fire engines and other apparatus.

**Mineral Wells, Tex.**—Arrangements are being made to establish a paid Fire Department.

**Milwaukee, Wis.**—The National Board of Fire Underwriters recommends the construction of five additional fire houses.

## PUBLIC BUILDINGS

**Little Rock, Ark.**—Stewart and Schmelzer have been awarded contract to construct new City Hall for \$154,883.—Charles L. Thompson, Architect.

**Yatesville, Ga.**—The city has voted to issue \$4,000 6 per cent. school bonds.

**Des Moines, Ia.**—The county has voted bonds for the erection of jail and heating plant.

**Leavenworth, Kan.**—Low bidders for buildings at Fort Leavenworth, received November 8, were as follows: J. G. Barnes, constructing two engineer stations, one double stable guard building, one engineer work shop, and two pontoon shops, at \$58,000; Martin Carroll, Kansas City, Mo., eight double-sets non-commissioned staff officers' quarters, at \$62,208; L. H. Balke, Denver, Col., plumbing work, at \$6,000; the Carros Electrical Company, St. Louis, Mo., electric wiring, at \$2,217.44.—Capt. Murray, Constructing Quartermaster.

**Danville, Ky.**—A site will shortly be selected for the erection of a \$50,000 Federal building.—Major Brackett, United States Inspector.

**Versailles, Ky.**—Council has voted to sell lot 100x100 to the Federal government as a site for a public building, for which \$25,000 has been appropriated.

**Springfield, Mass.**—The City Hall Commission recommends the erection of the structure on Court and Pyncheon streets and the removal of the Police Building and Fire Department to other sites, so the municipal building may occupy the entire block; the reconstruction of the police and fire buildings on other sites is probable.

**Northville, Mich.**—The proposition to issue \$10,000 school bonds carried.

**Chisholm, Minn.**—The Gray Construction Company, Watertown, S. D., has been awarded contract to construct new high school building, two-story and basement, 78x119 feet, twenty-two rooms, for \$59,121.—N. R. Parsons and Son Company, Des Moines, Ia., Architects.

**Matison, Miss.**—The matter of issuing \$12,000 school bonds is under consideration.

**St. Louis, Mo.**—Plans are being considered for additions to the city insane asylum, to cost \$900,000.—Address President, Board of Public Affairs.

**Springfield, Mo.**—The citizens of Greene county will vote, December 4, on the question of issuing \$150,000 Court House bonds.

**Atlantic City, N. J.**—Plans have been prepared for the new City Hospital, to cost \$75,000.—Seymour and Paul A. Davis, 907 Walnut street, Philadelphia, Pa., Architects.

**Ashtabula, O.**—The proposition to issue \$40,000 bonds to build school carried; the proposition to issue \$25,000 in bonds for park purposes failed to carry.

**Benton Ridge, O.**—The citizens have voted \$12,000 bonds to erect a four-room school house.

**Cleveland, O.**—The Buildings Committee of the School Board has recommended the erection, next year, of a high school to accommodate 1,000 pupils, also for four new public schools, to cost between \$40,000 and \$60,000; plans have been prepared for a four-story

school building, costing \$60,000, to be erected on Euclid Heights.—W. B. Mead, Architect.

**Cincinnati, O.**—Bids will be received November 26 for the purchase of \$200,000 4-year 4 per cent. school bonds.—William Grantman, Clerk.

**East Liverpool, O.**—The proposition to issue school bonds and water bonds failed to carry.

**Brookings, S. D.**—The voters of Brookings county will decide the question of issuing \$60,000 bonds for erecting a Court House.

**Bronson, Tex.**—The School Board has decided to issue \$220,000 bonds for school purposes.

**Channing, Tex.**—The Attorney-General has approved of an issue of \$8,000 40-year 5 per cent. school bonds; the bonds are optional after twenty years.

**El Paso, Tex.**—The question of issuing \$150,000 school bonds is being considered.

**Milwaukee, Wis.**—The four bond propositions carried; one is for \$75,000 for erecting a viaduct, the second for branch library, another for free baths on the South Side, and the fourth for free baths on the East and North Sides.

## STREET RAILWAYS

**Texarkana, Ark.**—The Texarkana Light and Traction Company's street railway and light plant has been purchased by the Texarkana Gas and Electric Company; the new owners announce that they will greatly improve the street railway lines and make loops or belts wherever it may be found practicable.

**Lebanon, Conn.**—The Lebanon Street Railway Company is waiting session of next Legislature to have the charter extended and little progress toward construction of its line from Norwich to Hartford will be made before next spring.—L. E. Livermore, President.

**Fort Myers, Fla.**—The Seminole Power and Ice Company will build an electric railway from Fort Myers to Fort Thompson.

**Belleville, Ill.**—Survey has been made for the Belleville and Pinckneyville Traction Company's line; the railway will be 4½ miles long.—Harper Brothers, Sexton Building, East St. Louis, Ill., Engineers-in-Chief; C. D. Turner, Belleville, President; George F. Meade, Pinckneyville, Secretary.

**Rome, Ga.**—Louisville, Ky., capitalists, headed by Atilla Cox, Jr., and S. S. Busch, have purchased the Rome City Electric Railway and Lighting plant from J. L. Bass; the purchase price, including contemplated improvements, is \$300,000.

**Chicago, Ill.**—The Evansville, Mount Carmel and Northern Railway Company has been incorporated, with a capital stock of \$10,000, for the purpose of constructing and operating lines in the cities of Chicago, Cairo and Vincennes.—W. C. Brown, J. Carstenson, of New York, C. E. Schaff, J. C. Grammar, and others, Incorporators.

**Ardmore, I. T.**—The Ardmore Electric Transit Company will build a street car line in Ardmore.—Capt. W. F. Whittington, Joe F. Robinson, C. L. Byrne, and others, Incorporators.

**Monroe, La.**—The city will extend the street car system a distance of about three miles.

**Kennebunkport, Me.**—The Atlantic Shore Line Railway Company, which is building a road from York Beach to Kennebunkport, eighteen miles, expects to have the line graded by December 1, so that track laying may be done in the spring; this line will complete connection between Portland, Me., and Boston, Mass.—George A. Murch, General Manager; W. E. Davis, Sanford, City Engineer.

**Minneapolis, Minn.**—The Minneapolis, Rochester and Dubuque Traction Company is ready to let contracts for its line, which is projected from Minneapolis to Dubuque, Ia., via Rochester, Minn., and Decorah and Waukon, Ia., 246 miles; right-of-way is partly secured.—F. D. Woodbury, Chief Engineer; William Peyton Mason, President.

**Omaha, Neb.**—The Omaha and Council Bluffs Street Railway Company is considering plans for new buildings and new power house which is required for the power station which the company is enforced to install to handle increasing traffic.

**Dallas, Tex.**—The three street railway systems, all of which are owned by the Stone and Webster syndicate, Boston, Mass., will be merged into one company if the authority of the City Council can be obtained; important improvements will be made if the consolidation is effected.—Address Guy E. Tripp.

**Seattle, Wash.**—E. M. Day, Bellingham, Wash., is interested in project to build an electric railway, about 160 miles in length, from Seattle to Bellingham and Vancouver, B. C. Surveys are partly made. Right-of-way is partly secured.

**Sheboygan, Mich.**—The Milwaukee and Fox River Valley Electric Company has been incorporated and will erect an electric road to connect with the Milwaukee Northern electric line at Cedarburg, extending from

that point north to Fond du Lac.—Address J. M. Seaman.

**Richmond, Va.**—The Richmond and Henrico Railway Company has applied for a charter, and proposes to take over the Citizens' Rapid Transit Company and to build a railroad from the same points in the city and to the same points in the county.—W. S. Forbes, President; W. W. Jenkins, Vice-President, and John C. Hagan, Secretary-Treasurer.

### BRIDGES

**Johnson's Ferry, Ga.**—The Roanoke Bridge Company, Roanoke, Va., has been awarded the contract for constructing modern steel bridge across the Chattahoochee river, for \$12,850.

**Power's Ferry, Ga.**—Austin Brothers, of Atlanta, have been awarded contract to construct modern, steel bridge across the Chattahoochee river at \$15,000.

**Aurora, Ill.**—A company is being organized to build a \$150,000 bridge across the river.

**St. Charles, Ill.**—C. A. Miller, City Attorney, has notified General Manager Faber, of the A., E. and C. Railway, that unless some action is taken in the matter of the Fifth street viaduct the thoroughfare will be closed; the Great Western has agreed to pay two-thirds of the cost of a new bridge, but the electric company thus far refuses to agree to pay the other one-third.

**Delphi, Ind.**—The contract for erecting bridge across the Tippecanoe river at Main's Ford has been awarded the Athea Bridge Company, of Athea, at \$11,938.

**Baton Rouge, La.**—The Southern Pacific Railway and the Illinois Central Railway are interested in constructing a new bridge across the Mississippi river.

**Indianola, Miss.**—The Southern Bridge Company, Birmingham, Ala., has been awarded contract to construct two steel draw bridges across the Sunflower river, at \$23,797 and \$24,454.—J. F. Fountain, of Dockery, and J. N. Welsh, Engineers-in-Charge.

**Meadville, Miss.**—An election is to be held in Franklin county, January 22, to vote on \$60,000 bridge bonds.

**Athens, O.**—The Cincinnati, Akron and Cleveland Railway is preparing plans for building a new bridge on East Market street at the Union depot.—A. B. Jones, Akron, Engineer.

**Coshocton, O.**—Labajohn and Williams, of Mansfield, have been awarded contract for the substructure of the Big Island Ford bridge, at \$15,084, and the Capital Construction Company, of Columbus, for the superstructure, at \$8,897.—George J. Bock, Jr., Designing Engineer.

**Kennerdell, Pa.**—The American Bridge Company, of Pittsburgh, has been awarded contract to construct bridge across the Allegheny river, for \$69,660.

**Portland, Pa.**—The contract for constructing reinforced concrete arch bridge was awarded the Pascoe Construction Company, at \$4,990; John McInerney and Charles Hoffman were the other bidders.—L. A. Francisco, Easton, County Engineer.

**Austin, Tex.**—The Fort Worth and Denver City Railway will replace all bridges with concrete and steel structures, and will make other vast improvements.—Frank Trumble, President.

**North Fort Worth, Tex.**—The city will construct a substantial iron bridge across Marine creek at Exchange avenue.

**Charleston, W. Va.**—The Kanawha Valley Traction Company will build a bridge over the Kanawha river, about two miles below the city, which will in all probability be a foot, street-car and railroad bridge.

**Green Bay, Wis.**—The City Engineer will prepare plans and specifications for a bridge to be constructed over Fox river at Walnut street.

**St. Boniface, Man., Can.**—Council ratified the recommendations of the committee and the offer to pay \$50,000 toward a bridge from Lombard street or McDermot avenue, Winnipeg, to Aubert street, St. Boniface, or \$75,000 for a bridge from Water street subway, Winnipeg, to Dumoulin street, St. Boniface.

### MISCELLANEOUS

**Crowley, La.**—The citizens have voted to issue \$100,000 in bonds for public improvements.

**Bay St. Louis, Miss.**—The citizens have voted \$4,000 school improvement bonds.

**Ashtabula, O.**—A \$25,000 bond issue for the purpose of improving the parks has been recommended by the Park Board.—M. H. Kunkle, Chairman.

**Columbus, O.**—The contract for the grandstand to be erected in the State Fair Grounds was not let, bids being in excess of appropriation; they will be readvertised.—J. L. Calvert, Secretary, State Board of Agriculture.

**Cleveland, O.**—Bids for the deposit of city funds were received, November 5, from twenty-eight banks; the fourteen highest bidders offer an average rate of 3.98 per cent., and for school funds 3.918 per cent., the highest individual bid for city funds being made by the Euclid Avenue Trust Company, it being 4.05 per cent.; the city's fund on deposit during the past three years has averaged \$7,000,000, and will be larger next year; the schools have an average deposit of \$1,750,000.—Mayor Johnson, City Solicitor Baker, and City Treasurer Nau, Depository Commission.

**Steubenville, O.**—The Phoenix Telephone Company has petitioned for franchise to place telephone conduits in certain streets.

**Philadelphia, Pa.**—The Penn. Reduction Company has been awarded contract for the collection and disposal of garbage for 1907, for \$418,500, an increase of \$18,925 over the price paid the same company this year, owing to the fact that 8,000 more dwellings must be collected from; David Peoples submitted a bid, at \$440,000.

**Knoxville, Tenn.**—Borchers, Warhrep & Co. have been awarded contracts by the Southern Railway to build an office building, blacksmith shop, storage room, crematory, paint shop, wood working shop, and other buildings, aggregating \$200,000.

**Richmond, Va.**—Bids will be received until noon, November 21, for the purchase of \$994,760 4 per cent. 34-year city bonds.—Edward J. Warren, City Auditor.

### INCORPORATIONS

**Arrow Brick Works, New York City;** to manufacture brick, etc. Capital, \$100,000. Incorporators: Moses Ely, Albert J. Hiers, Thomas G. Shearman, New York.

**Atlantic Refrigerating Machine Company,** 419 Market street, Camden, N. J.; to manufacture refrigerating machines, etc. Capital, \$150,000. Incorporators: S. Lane Anderson, F. S. Gibson, Harrie T. Walter.

**Clinton Waterworks Co., Clinton, Iowa;** to construct waterworks. Capital, \$125,000.

**I. S. Decker Company, Binghamton, N. Y.;** cement, brick, stone, contractors, etc. Capital, \$20,000. Incorporators: Ira S. Decker, Willard M. Camp, James Sullivan, Binghamton, N. Y.

**Delaware and Belvidere Telephone and Improvement Company, Delaware, N. J.;** telephone and telegraph lines. Capital, \$2,000. Incorporators: Charles J. Quigg, F. Brisbane, Michael C. Allen, George T. Peall, Jacob E. Albertson, John H. Albertson, Joseph B. Kimmour, Delaware, N. J.

**Fish River Improvement Company, Holton, Me.;** building dams, booms, etc. Capital, \$100,000. President, F. C. Dunn, Ashland, Me.; Treasurer and Clerk, W. C. Donnell, Houlton, Me.

**Fulton Chain Electric Company, Fulton Chain, N. Y.;** electric light, heat and power. Capital, \$5,000. Incorporators: Spencer Kellogg and Frederick S. Kellogg, Utica, N. Y.; Frederick Cleveland, Fulton Chain, N. Y.

**Jamaica Paragon Plaster Co., Jamaica, N. Y.;** to manufacture wall plaster, brick, pipes, etc. Capital, \$50,000. Incorporators: John J. Bliss, Jamaica, N. Y.; E. L. Merriman and George D. Brown, Scranton, Pa.

**Kankakee Light, Heat and Power Co., Portland, Me.;** to supply light, heat and power. Capital, \$100,000. Incorporators: M. W. Baldwin; treasurer, C. E. Eaton, both of Portland, Me.

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**Leadville Light and Power Company, Leadville, Colo.;** to acquire, hold, operate, and dispose of land, machinery, power plants. Capital, \$800,000. Incorporators: O. B. Willcox, Leonard E. Curtis, and W. R. Waterton.

**The Little River Power Company, Gadsden, Ala.** Capital, \$100,000. Incorporators: R. A. Mitchell, Alabama City; F. W. Mitchell, Gadsden.

**Manufacturers' Fuel and Light Co., 419 Market street, Camden, N. J.;** to manufacture and produce gas from any carbonaceous matter, etc. Capital, \$250,000. Incorporators: Charles E. Thomas, P. O. Harper, M. A. McKee, all as above.

**Oakland Electric Light and Gas Co., Oakland, N. Y.;** light, heat and power. Capital, \$50,000. Incorporators: Eugene Frost and William H. Ash, Cortlandt, N. Y.; Albert E. Bliss, Greenburg, N. Y.; John B. Newhall, Tompkinsville, N. Y.; Lewis T. Hanley, Brooklyn, N. Y.

**Philadelphia Pipe Bending Co., 102 Church street, New Brunswick, N. J.;** to manufacture and bend pipe, valves, pipe fitting, etc. Capital, \$50,000. Incorporators: George M. Harden, The Delmar, Chilton avenue and Morris street, Germantown, Pa.; Edward Morris, Metuchen, N. J.; Wellard P. Voorhees, 35 Union street, New Brunswick, N. J.

**St. George's Brick Co., Boston, Mass.;** bricks. Capital, \$250,000. Incorporators: Theodore Eaton, Albin F. Richards, Allston D. Van Wagner, all of No. 31 Milk street, Boston, Mass.

**Strang Gas, Electric and Car Company,** 243 Washington Street, Jersey City, N. J.; general contracting, electricians, mechanical engineers, etc. Capital, \$4,000,000. Incorporators: Charles N. King, George H. Russell, Elmer H. Geron, all as above.

**Utah Toll Road Company, 419 Market street, Camden, N. J.;** to operate toll roads, bridges, ferries, etc. Capital, \$25,000. Incorporators: John M. Mack, A. W. Sewell, Avery D. Andrews, Clyde Brown, Land Title Building, Philadelphia, Pa.; George H. B. Martin, as above.

**Unique Engineering Company, New York City;** to manufacture smoke consumers, draught generators. Capital, \$25,000. Incorporators: George R. Rothenbucker, 183 Alabama avenue; Richard Buchholz, 532 Lorimer street; William Rappersberg, 201 Pennsylvania avenue, all of Brooklyn, N. Y.

**Utica Sweeping and Contracting Company, Utica, N. Y.;** to construct public and private works. Capital, \$10,000. Incorporators: Harry W. Roberts, Frederick E. Cantwell, John G. Gibson, Utica, N. Y.

**West Coast Construction Co., New York City;** construction of all kinds. Capital, \$1,000. Incorporators: Henry V. Poor, George J. Corbett, James A. Hatch, 54 Wall street, New York.

**West Shore Electric Co., electric light, heat, and power. Capital, \$40,000. Incorporators:** John N. Briggs, Charles Van Hossen, Stephen W. Mosher, Coeymans, N. Y.; William H. Baldwin, New Boellmon, N. Y.; Herbert Layman, Herbert Hart, James H. Cochrane, Ravena, N. Y.

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JOHN BAKER, Jr., Manager



## BOOK REVIEWS

**Contributions to Economic Geology.**—S. F. Emmons and E. C. Eckel, Geologists in Charge. 1905. United States Geological Survey, Charles D. Walcott, Director.—This volume contains, under the heading of "Asphalt," an account of the Ozocerite deposits of Utah. A list is added of the more important papers relative to asphalt, published by the United States Geological Survey or by members of its staff. Under the caption of "Portland, Natural, and Puzzolan Cements," the resources of the Cumberland Gap district and of Washington are dealt with in papers by E. C. Eckel and Henry Landes, respectively.

**Dayton Data.**—This, the latest map and street directory of Dayton, O., gives facts and general information regarding the Gem City of Ohio. The information in the booklet is alphabetically arranged. Turning to "City Government," it is noted that the cities of Ohio operate under the provisions of a municipal code, which in its general provisions applies to all alike. Under the caption "Water Works" it is stated that ninety-four eight-inch subterranean tube wells driven thirty to sixty feet in depth in the bed of the Mad River, supply an average daily consumption of 7,000,000 gallons.

**Eminent Engineers.**—By Dwight Goddard, 1906; the Derry-Collard Company, New York.—This book presents the biographies of thirty-two inventors and engineers whom the author considers have done most to further mechanical progress. Among those whose work has been of importance to cities are Peter Cooper, who, the author states, by organizing the Fire Department and water supply of New York City, is largely responsible for their present efficiency. To Alexander R. Holley is given credit for the organization and meetings of societies in which social as well as scientific features are combined. To the work of James B. Eads in bridge building and harbor improvements, it is stated, some cities owe almost their existence.

**Petaluma, Sonoma County, California.**—The Chamber of Commerce has issued an illustrated folder setting forth the advantages of Petaluma. Under the caption of "Municipal Improvements," it is noted that the Fire Department had not been called out for a year. This seems almost a matter of regret, as water can be supplied to extinguish a fire by direct pressure from a 40,000,000-gallon reservoir built at an altitude of 270 feet above the lowest level of the town. The fall to tide level gives the city good drainage.

**Thirty-first Annual Report of the Board of Park Commissioners, Boston, Mass., for the Year Ending January 31, 1906.**—Little new construction was undertaken during the year, that little being in the line of improvements to playgrounds. In fact, the Commissioners complain that under the inadequate appropriations for maintenance the general condition of the parks is deteriorating. The area in charge of the Department is 2,359 acres; length of driveways, 44 miles; length of walks, 16 miles; length of rides, 8.7 miles, and area of ponds and rivers, 125 acres. The total cost of land and construction to date is \$18,359,580.

## LEGAL NEWS

A Summary and Notes of Recent Decisions  
—Rulings of Municipal Interest

## Court Ousts Councilman

**Taxpayers' League vs. Witman.**—Judge Endlich has handed down an opinion ousting William Abbott Witman from the City Council. This is the result of proceedings instituted several months ago to declare Witman's seat vacant on the ground that he was interested in city contracts in the matter of the sale of the products of his stone quarry. Witman said the contracts were made by his brother, to whom he sold the sand and spalls.—Common Pleas, Reading, Pa.

## Highway Belongs to Public

**Commonwealth vs. Beaver Valley Railroad Company.**—The municipal authority of the Beaver borough granted the Beaver Valley Railroad Company the right to lay its railroad on Fifth street longitudinally. The construction cost \$130,000, and the road was being actively operated. Several abutting property owners, through the suggestion of the Attorney General, sought to restrain the company from operating its road and sought to remove the road as a nuisance. Held, that the railroad company had a lawful right to construct and operate, as a highway is the property of the public, not of a particular district, but of the whole State; and the fact that the Legislature of 1791 provided that the street in question, among others, should be a common highway forever cannot lessen the control of the State.—Common Pleas, Dauphin County, Pa.

## License Can Be Collected

**City of Columbia, S. C., vs. Middlebrook.**—Middlebrook was conducting a money-lending business outside of the city and at the same time having his agents employed inside the corporation limits. The Recorder had ruled that Middlebrook was liable for the license of \$100, and a fine of \$40 was imposed. The court held that the mere location of an office outside of the city limits was a mere subterfuge to avoid paying the city license, and the appeal was accordingly dismissed.—Court of Appeals, Columbia, S. C.

## Municipal Authority Upheld

**Cole vs. City of Indianapolis.**—When the Consumers' Gas Trust Company was chartered a clause in the franchise specified that, if the company should fail to serve the people, the city might take over the mains of the company at their appraised value. When natural gas failed two years ago and the city sought to exercise its right, opposition was made and the case was taken into the courts. The Supreme Court in denying the application of R. M. Cole and others for a writ of certiorari affirmed the decision of the Court of Appeals which was favorable to the city. The sale of its option to the Citizens' Gas Company which was organized by popular subscription to supply artificial fuel gas at a price not to exceed 60 cents per 1,000 is affirmed.—U. S. Supreme Court, Washington, D. C.

## CONVENTION NOTES

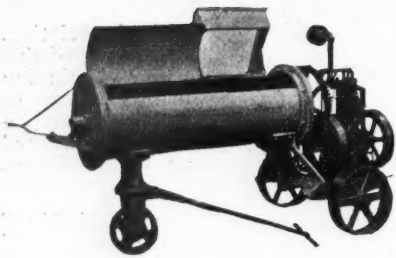
## American Public Health Association.

—A notice of the annual meeting of this association, at Mexico City, beginning December 3, appeared in this column of the issue of October 17. The latest revised list of the papers to be presented is as follows: Three on Yellow Fever, by Drs. Juan Guiteras, Havana, Cuba; Joseph Goldberger, Washington, D. C., and Quitman Kohnke, New Orleans, La. Two on Tropical Diseases, by Col. William C. Gorgas, Ancon, C. Z., and Dr. Pedro Gutierrez Ygaravidez, Bayamon, P. R. Two on Milk, by Dr. Charles Harrington, Boston, Mass., and Prof. R. A. Pearson, Ithaca, N. Y. Two on Tuberculosis, by Dr. Lawrence F. Flick, Philadelphia, Pa., and Dr. Hugh A. Cowing, Muncie, Ind. One on Water-borne Diseases, by B. H. Stone, Burlington, Vt. Two on National and International Sanitary Problems, by Dr. Peter H. Bryce, Ottawa, Ontario, and Dr. Alvah H. Doty, New York City. Two on Vital Statistics, by Dr. Cressy L. Wilbur, Washington, D. C., and John S. Fulton, Baltimore, Md. Also one on the Physical Welfare of School Children, by William H. Allen, New York City; and one on Car Sanitation, by T. R. Crowder, Chicago, Ill. Titles of papers to be presented by members from Mexico have not yet been received.

Calendar of Meetings of Municipal  
and Allied Societies

- November 26.  
State Convention to Consider State or Municipal Fire Insurance.—American House, Boston, Mass.—The convention was planned by the Holyoke Business Men's Association and the Boards of Trade as well as city governments will be represented.
- December 3-4.  
American Society of Refrigerating Engineers.—Annual meeting, New York City.—W. Everett Parsons, Secretary, 12 West 31st street, New York City.
- December 3-7.  
American Public Health Association.—Thirty-fourth annual meeting, Mexico City, Mexico.—Dr. Charles O. Probst, Secretary, Columbus, Ohio.
- December 4-7.  
American Society of Mechanical Engineers.—Annual meeting, New York City.—F. R. Hutton, 12 West 31st street, New York City.
- December 5-7.  
National Association of Manufacturers of Sand-lime Products.—Third annual convention, Chicago, Ill.
- December 5-7.  
National Drainage Conference.—Oklahoma City, Okla.—A. W. Knead, Secretary, Oklahoma City, Okla.
- December 6-7.  
National Rivers and Harbors Congress.—Convention, Washington, D. C.
- December 11-12.  
American Portland Cement Manufacturers.—Fourth annual meeting, Hotel Astor, New York City.—C. Earle E. Bottomley, Assistant Secretary, Land Title Building, Philadelphia, Pa.
- December 27-January 2.  
American Association for the Advancement of Science.—Annual meeting, New York City.—L. O. Howard, Secretary, Cosmos Club, Washington, D. C.
- January.  
American Institute of Social Service.—Exposition, New York City.—Dr. William H. Tolman, Director, 287 Fourth avenue, New York.
- February 15-16.  
Wisconsin Gas Association.—Annual meeting.—Henry H. Hyde, Secretary, Racine, Wis.
- February 22.  
New England Association of Gas Engineers.—Annual meeting, Boston, Mass.—N. W. Gifford, Secretary, New Bedford, Mass.
- April 18-21.  
Southwestern Gas, Electric and Street Railway Association.—Annual meeting, San Antonio, Tex.—Frank C. Duffey, Secretary, Beaumont, Tex.

## TRADE NOTES



GRANT CONCRETE MIXER

THE drum of the Grant concrete mixer, which is six feet in length and twenty inches in diameter, is made of 3-16-inch rolled steel, except the ends, which are cast. Through the center of this drum is a 2-inch square steel shaft, slipped over which for its entire length are twenty-six steel paddles, set alternately around the shaft, thus mixing all the time while in operation, and affording an even distribution of power. The mixing shaft revolves 55 times per minute. The height from the lower lip of the opening for the reception of materials into the forward part of the drum is but 40 inches from the ground, and the width of the opening is 24 inches. Through the 3-horsepower gasoline engine equipped with rotary circulating pump, a stream of water is projected through the jacket of the engine cylinder for cooling purposes, and then, warm, through a half-inch pipe carried along the top of the drum, which automatically sprays the mixing material over the last 2 feet 9 inches of the mix, gauged by the hand of the shoveler having charge of the machine. The manufacturers, the United States Concrete Machine Company, 139 E. Grand Boulevard, Detroit, Michigan, claim that it will mix anything from rough concrete to cement mortar and top dressing for walks, and will produce 50 cubic yards of thoroughly mixed concrete in ten hours. The shipping weight of the Grant, fully equipped and ready for operation is 2,060 pounds.

**ROOFING.**—The Sandusky Portland Cement Company, Sandusky, O., is supplying Medusa Waterproof Compound for the roof of the Animal House in the Zoological park, Cincinnati, O.

**TURBINES.**—The Hooven, Owens, Rentschler Company, Hamilton, O., has licensed the Felten-Guelleaume Lahmeyer Works, Frankfort, Maine, Germany, to build the Hamilton-Holzworth turbine in Germany. The machine was selected after a series of tests at the University at Daunstadt.

**WATERPROOFING COMPOUND.**—The Electrical Cable Company, 17 Battery Place, New York City, recommends its paint as a waterproofing compound for the use of cement block manufacturers. It may be used to prevent cement from sticking to the machine, in the process of manufacture or to paint the blocks to render them waterproof.

**PAVING BRICKS AND BLOCKS.**—The Mack Manufacturing Company, Land Title Building, Philadelphia, Pa., issues a very handsomely illustrated catalogue, explaining the merits of brick paving in general and its own manufacture in particular. Favorable opinions of a large number of City Engineers are quoted, and Prof. Baker's specifications for testing paving brick are given at length. The claims made for brick pavements are: Cheapness in first cost, economy in maintenance, ease of repair, freedom from decay. First rank among pavements is claimed in respect to healthfulness and foothold for horses, and it is said to be second only to granite in durability. It is claimed to be equal to asphalt in respect to water-tight covering, freedom from noise and dust, and ease of traction.



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## PATENT CLAIMS

833,551.—Process of Facing Roadways, Streets, and Walks. George Ross and Stephen F. Deal, Kansas City, Mo. Serial No. 295,811.

The process of facing roadways and the like, consisting in loosening and pulverizing the earth to a suitable depth, depositing a binder therein impervious to water and having tough and tenacious properties, and then in compacting the mass of loose earth containing the binder in any suitable manner.

833,629.—Molded Stone Building-Slab. Orvey Price, Plainfield, N. J. Serial No. 267,486.

A building-block whose top and bottom and end edges are provided respectively with rabbeted surfaces having oppositely-curved cross-sections, those of one edge and end extending partly through the block from its back face, and plain surfaces from thereon to its front face, the plain surfaces at opposite edges of the block near the front face being at an angle to each other, whereby the plain surfaces of the adjacent blocks are out of contact.

833,675.—Device for Marking Artificial Stone. Samuel S. Chezem, Terre Haute, Ind. Serial No. 313,446.

A device of the kind described comprising a slotted plate having a suitable handle and a slotted guideway arranged upon the outer face of the plate opposite the slot, and an adjustable gage arranged at the end of the plate, for the purpose set forth.

833,749.—Cleaner for Buckets of Excavating-Machines. Howard Pike, Chicago, Ill., assignor to F. C. Austin Drainage Excavator Company, Chicago, Ill., a Corporation of Illinois. Serial No. 302,529.

The combination with an excavator-bucket and means for effecting the inversion thereof, of a cleaner pivotally mounted externally of said bucket, said cleaner having an operating edge adapted to engage the forward edge of the bottom wall of the bucket and scrape over said bottom wall during the inverting of the bucket, substantially as described.

833,764.—Dump-Wagon. Henry C. Tripp, Auburn, N. Y. Serial No. 287,867.

In a dump-wagon, a box having swinging bottom doors hinged to its sides and meeting at substantially its longitudinal center, a pair of sheaves on each door near its meeting edge, additional sheaves near each end of the box directly over the meeting edges of the doors, an upright drum at the front end of the box near one end, an anchor at the opposite end of the box and a cable passed around said sheaves and having one end attached to the drum and its other end attached to said anchor.

833,792.—Construction and Sinking of Caissons or the Like. Daniel E. Moran, Mendham, N. J. Serial No. 323,004.

The method which consists in sinking a caisson, and erecting a metal column within said caisson extending continuously from the subfoundation to the top of the caisson, and subsequently inclosing said column in an envelope of concrete.

834,086.—Sheet-Piling. Charles C. Tompkinson, Plainfield, N. J. Serial No. 287,938.

An interlocking pile comprising a trough-shaped beam, a second beam having a flange secured at the rear face of said trough-beam with its flange projecting theretoward, and spacing means between said beams, whereby a recess is formed between the web of the trough-beam, the flange of the second beam and the spacing means for the reception of the flange of a second trough-beam to be interlocked therewith.

834,093.—Gas-Meter. Albert S. J. Weir and Thomas J. Henning, San Diego, Cal. Serial No. 315,924.

The improved bellows for gas-meters formed of flexible sheet metal and comprising a head having its edge intumed and a series of annular sections also having their edges curved inwardly, and alternately in opposite directions, the several edges of the head and the sections being overlapped and secured together, substantially as described.

## Civil Service Examinations

**Topographical Draughtsman.**—New York City.—Municipal Civil Service Commission has given notice that applications will be received until 4 P.M., Monday, December 3, for the position of Topographical Draughtsman. The examination will be held on Wednesday, December 12, at 10 A.M. Under "Technical Knowledge" candidates will be examined practically as to their ability to draw, letter, etc., and will be required to furnish their own drawing materials. The salary is \$1,200 per annum and over. Vacancies in all departments will be filled from this list. The minimum age is 21 years. Address Frank A. Spencer, Secretary.

## Proposals

## Undergrade Crossing

Williamsport, Pa.

Sealed proposals will be received at the office of the City Clerk, until Saturday, 12 o'clock noon, December 1, 1906, for the construction of an undergrade crossing under the P. & E. R. tracks at Campbell street.

Each bid or proposal must be accompanied by cash or a certified check on a Williamsport bank for the sum of \$1,000, made payable to the order of the City Treasurer of Williamsport, Pa., said cash or check being deposited as a guarantee that the bidder or bidders will enter into contract within ten days after the acceptance of their bid and furnish bond for the complete construction of the work to the amount of 50 per cent. of the contract price.

The contract consists of the following approximate quantities: 375,000 pounds of steel, 1,070 cubic yards concrete, 220 feet of 4-foot sewer, 100 feet 24-inch sewer, 100 feet 15-inch sewer, 2 manholes, 14,000 square feet of cement sidewalk, 400 feet drain tile, 400 square yards of brick pavement, 500 cubic yards excavation, 220 feet dressed stone, 20 blocks cut stone.

Plans and specifications for the work can be seen and proposal blanks can be had at the office of the City Engineer. All proposals submitted shall be addressed to the City Clerk of Williamsport, Pa., endorsed "Campbell Street Undergrade Crossing." The right is reserved to reject any or all bids by the Railroad Committee of Councils.

J. J. GALBRAITH, City Clerk.

JAMES F. FISHER, City Engineer.

## Bridge

Newport, Ind.

Notice is hereby given that the Board of Commissioners of Vermillion County, Indiana, will receive sealed bids at the office of the Auditor of said county, at Newport, Indiana, up to the hour of 10 o'clock A.M., on the 15th day of December, 1906, for the construction of the substructure for a highway bridge across the Wabash River near Newport, Indiana.

The said substructure to be constructed in compliance with the plans and specifications for the same, now on file in the said Auditor's office.

All bids must be accompanied by a good and sufficient bond as required by the statute, to be approved by the Board of Commissioners.

Blank bids and bonds may be had from the Auditor of said county.

By order of the Board of Commissioners of Vermillion County, Indiana.

W. T. SANDERS,

ALLEN FRAZER,

GEO. E. TILLOTSON,

Vermillion County Commissioners.

H. T. PAYNE, Auditor.

## Steel Bridge

Carthage, Tenn.

Bids will be received up to Dec. 15, 1906, at noon, for the construction of a 600-ft. steel highway bridge across the Caney Fork River, about three miles from Carthage, Tenn., according to plans and specifications on file at my office. The right to reject any or all bids reserved. Bridge will be paid for in cash.

W. E. MYER,

Carthage, Tenn.,

Ag't. for Carthage & Granville Bridge Co.

## Concrete Crib

U. S. ENGINEER OFFICE, 415, Custom-House, Cincinnati, Ohio, Nov. 12, 1906.—Sealed proposals for reconstructing, in concrete, conduit, guide and guard cribs at Lock No. 4, Muskingum River, Ohio, will be received here until 1 o'clock P.M., December 12, 1906, and then publicly opened. Information furnished on application. J. G. Warren, Maj. Engrs.

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## Sewers

OFFICE, COMMISSIONERS DISTRICT OF COLUMBIA, Washington, Oct. 27, 1906.

Sealed proposals will be received at this office until 12 M., November 27, 1906, for constructing sewers in the District of Columbia. Forms, specifications and necessary information may be obtained at Room 43, District Building, Washington, D. C.

HENRY B. F. MACFARLAND,

HENRY L. WEST,

JOHN BIDDLE,

Commissioners, D. C.

## County Bonds

October 19, 1906.

The Board of Supervisors of Russell County desires to issue and sell County Bonds for the purpose of making permanent improvements of the Public Roads in said county, in all respects according to the acts of the General Assembly of Virginia, approved May 14, 1906, Acts 1902-3-4, page 354, and the Clerk of this Board is directed to give such other information as may be necessary.

R. G. FLETCHER,

Clerk of the Board.

Lebanon, Pa.

## Waterworks

Bids will be received by the City of O'Fallon, Illinois, until 8 o'clock P.M. of December 3, 1906, for a waterworks distributing system, in accordance with the official plans and specifications of said city.

Certified check required with bid, for 5 per cent. of the amount of bid, payable to the Treasurer of the City of O'Fallon, Illinois.

Plans and specifications are on file and may be seen at the office of the City Clerk of O'Fallon, Illinois, and at the office of Owen Ford, consulting and supervising engineer, 710 Security building, St. Louis, Mo.

JOHN SEDDON, Mayor.

W. R. Lawrence, Clerk.

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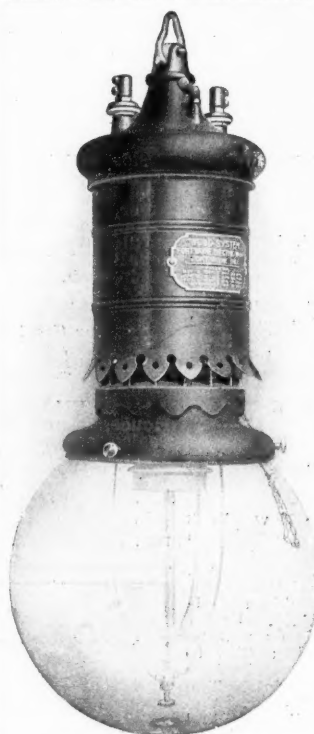
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